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THE
RECSSION'S EFFECTS ON
METROPOLITAN BOSTON
1980-81

PERFORMANCE OF THE BOSTON AREA ECONOMY IN A REGIONAL & NATIONAL CONTEXT

JUNE 1982

THE RECESSION'S EFFECTS ON BOSTON, 1980-1981:

PERFORMANCE OF THE BOSTON AREA ECONOMY IN
A REGIONAL AND NATIONAL CONTEXT

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June 1982

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THE HISTORY OF THE

REIGN OF THE EMPEROR
OF THE ROMAN EMPIRE
FROM THE DEATH OF THE EMPEROR
CONSTANTINE THE GREAT TO THE
DEATH OF THE EMPEROR THEODOSIUS THE GREAT

BY THE REV. JOHN GREGORY, D.D.

OF THE UNIVERSITY OF OXFORD

IN TWO VOLUMES

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I. SUMMARY: EMPLOYMENT TRENDS FOR THE U.S., NEW ENGLAND,
MASSACHUSETTS, AND METROPOLITAN BOSTON, 1980-1981

During 1981 the U.S. economy lapsed into a recession after having just recovered from a mild economic setback in 1980.* The economies of the Boston Metropolitan Area, the state of Massachusetts, and the New England Region outperformed the national economy during the 1980 recession and through most of the period to June 1981. Since mid-1981 the monthly economic performance of these areas, as measured by employment, has evidenced a recessionary impact similar to that of the U.S. economy. Nevertheless, as of early 1982 both the New England Region and Massachusetts stood at marginally better positions relative to the nation than they maintained in January 1980. There is no doubt that 1980-1981 was a period of generally sluggish economic growth, with outright employment declines in certain industries. Despite these events which affected all U.S. regions to varying degrees, New England fared better than many other regions while metropolitan Boston held a comparably strong economic position.

Varying patterns of industry employment growth and decline are evident when comparing the four areas (see Summary Tables A and B). Employment data extending through January 1982, the most recent time period now available, reveal that the current economic slowdown is

* As designated by the National Bureau of Economic Research, (NBER) which denotes business cycle peaks and troughs, the 1980 Recession lasted from January to July while the 1981 Recession began in July and had not yet ended as of April 1982. In the statistical analysis of this paper January and July are used as points of time because they represent consistent periods of employment troughs in seasonally unadjusted employment series and therefore do not overmeasure (trough to peak) or undermeasure (peak to trough) employment change as would occur using other time points.

largely centered in the construction, manufacturing, and government sectors of the national, regional, state, and local economies. On the national level the recession is much deeper in construction and manufacturing, while on the regional and local economic levels the construction and manufacturing losses are less severe but are compounded by declining government employment. In recent months, wholesale and retail trade industries have reportedly begun to be affected, although the data do not yet show this downturn. Gains in services, finance, transportation, and trade for these areas have largely balanced the losing sectors over most of the 25-month time span. This is particularly true for metropolitan Boston employment which has risen 1.3 percent in two years and does not show severe losses in any sector except government. Employment data for the City of Boston available only through June 1981, showed smaller gains (about .7 percent) in 1981 than those of the previous three years but are still positive.

As the recession proceeds through 1982, the year is expected to bring additional employment declines, particularly for the affected industries. Losses since mid-1981 are continuing and unemployment rates are rising to higher levels. The unemployment rate for the City of Boston is back up to the national average after being below it for most of the previous two years. Fortunately, the superior regional and local economic performance through 1980 to mid-1981 provided a cushion against any serious regional decline since then. Two key issues are raised about the possible path of economic recession in metropolitan Boston and the New England region: (1) the chance of a delayed, more adverse recessionary effect similar to some past regional

experience; and (2) the compounded impact of two years of decline in the manufacturing and government sectors upon other more vigorous parts of the local and regional economies. While the first issue seems to be moderated by recent economic gains and structural transformation, the second issue may be a threat, especially because of lingering government losses. Thus, New England and its sub-regions' losses may not be as severe as in 1975 even though the current national economic difficulties are serious.

In summary, the primary topic addressed by this paper is the experience and progress of the economies of the New England region and Boston metropolitan area over the rough economic waters since January 1980. This report, using employment as a measure of economic activity, provides an in-depth comparison of the U.S., New England, Massachusetts, and metro Boston economic experience. Such economic analysis is directly relevant to assessing the current economic status of Boston and is useful to anticipate future events. The major findings are:

- (1) The New England Region and Boston Metropolitan Area economies fared better than the U.S. economy from January 1980 through June 1981, a period of mild recession and recovery, and have been about equally affected in the more serious recession since mid-1981.
- (2) The type of recessionary effects differed among the areas, with (a) the U.S. economy showing adverse manufacturing and construction employment setbacks amidst mixed results in other industries, (b) the New England and Massachusetts economies showing smaller losses in manufacturing and construction, with some government declines apparently highly variable among sub-regional areas, and (c) the economy of the Boston Metro Area showing large government employment loss, some manufacturing decline and virtually no construction setback.

- (3) While delayed, serious recessionary effects and "second-round" impacts of national losses are possible in New England and the local Boston economy during 1982, the more stable and modern economic base of the region, combined with the advances made during the 1970s, should serve to moderate the effects of such losses.

Despite the adverse national economic times of the last two years, the Boston area economy has suffered comparatively less than other U.S. regions suggesting that the relative economic strength of the local economy has improved, and indicating a potential for a strong mid-1980s' economic performance.

II. COMPARATIVE TRENDS IN TOTAL EMPLOYMENT

In the two years since the January 1980 onset of the first of the recessions of this decade, the New England, Massachusetts, and Metropolitan Boston economies have fared better than the U.S. economy as a whole. (Summary Tables A and B.) United States employment grew by only a net 130,000 jobs and a 0.1 percent rise with recessionary losses all but cancelling job gains. The New England and Massachusetts economies both rose at the same 0.4 percent rate adding 24,000 and 9,000 net new jobs respectively. Boston's metropolitan area employment expanded by 19,000 jobs and a 1.3 percent rate, a much healthier performance over the two-year period. These results can be explained in part by the 1976-1980 economic transformation and modernization of the regional and local economies and the notable differences between the industrial structure of the New England area and the industries experiencing the brunt of the recessionary losses nationally.

The two-year time span from January 1980 through January 1982 can be separated into three distinct time periods: (1) the 1980 recession, lasting the first six months of 1980; (2) the 1980-1981 recovery, lasting twelve months from mid-1980 through mid-1981; and (3) the 1981-1982 recession, covering the last half of 1982 and continuing to date. Comparing and contrasting the employment experience of the four areas over these separate time periods reveals distinctly different trends. In short, the 1980 recession was much more evident in the U.S. economy as a whole than in the economies of the New England region. The year long recovery was greater for the United States because there was more lost ground to be regained. The latest recessionary bout mirrors that of 1980, being more pronounced for the United States as a whole.

SUMMARY TABLE A

JOBS ADDED OR LOST BETWEEN JANUARY 1980 AND JANUARY 1982
UNITED STATES, NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

| <u>Area</u> | <u>Industry Type</u> | | | |
|---------------|-----------------------------|--------------------------------|--|--|
| | <u>Total Employment</u> | <u>Total Manufacturing</u> | <u>Manufacturing Durable Goods</u> | <u>Manufacturing Non-Durable Goods</u> |
| United States | +130,000 | -1,338,000 | -1,028,000 | -310,000 |
| New England | +23,700 | -61,700 | -29,900 | -31,800 |
| Massachusetts | +9,300 | -23,600 | -6,400 | -17,200 |
| Boston SMSA | +19,100 | -2,800 | -700 | -2,100 |

| | <u>Total</u> | | |
|---------------|---|---------------------------------------|-----------------|
| | <u>Non-Manufacturing Employment</u> | <u>Wholesale and Retail Trade</u> | <u>Services</u> |
| United States | +1,467,000 | +351,000 | +1,375,000 |
| New England | +85,400 | +26,900 | +92,300 |
| Massachusetts | +32,900 | +11,000 | +58,000 |
| Boston SMSA | +21,900 | +3,300 | +41,800 |

| | <u>Government</u> |
|---------------|-------------------|
| United States | -139,000 |
| New England | -49,000 |
| Massachusetts | -44,400 |
| Boston SMSA | -23,100 |

Source: Compiled from U.S. 790 Series of Non-Agricultural Employment (Monthly, Not Seasonally Adjusted), U.S. Bureau of Labor Statistics, Massachusetts Division of Employment Security.

SUMMARY TABLE B

PERCENT CHANGE OF EMPLOYMENT BETWEEN JANUARY 1980 AND JANUARY 1982
UNITED STATES, NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

| <u>Area</u> | <u>Industry Type</u> | | | |
|---------------|-----------------------------|--------------------------------|--|--|
| | <u>Total Employment</u> | <u>Total Manufacturing</u> | <u>Manufacturing Durable Goods</u> | <u>Manufacturing Non-Durable Goods</u> |
| United States | +0.1% | -6.4% | -8.2% | -3.8% |
| New England | +0.4% | -4.0% | -3.1% | -5.4% |
| Massachusetts | +0.4% | -3.5% | -1.2% | -6.4% |
| Boston SMSA | +1.3% | -0.9% | -0.4% | -2.2% |

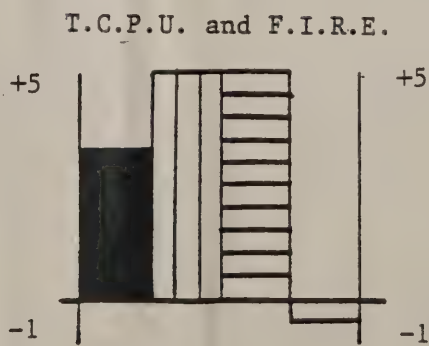
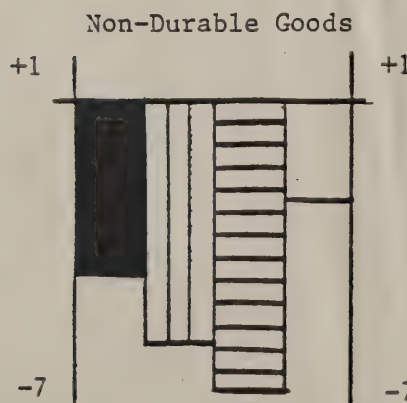
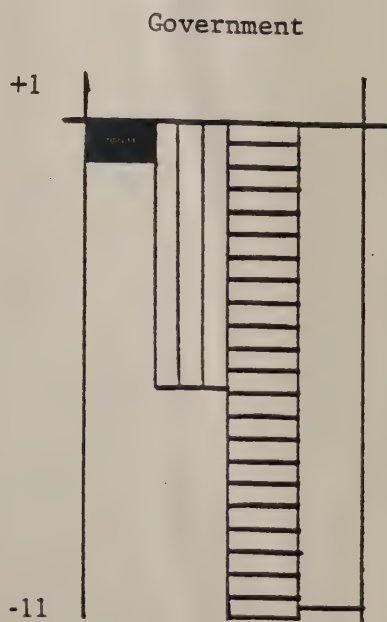
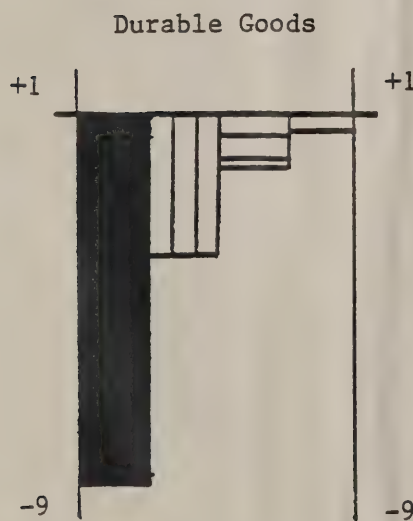
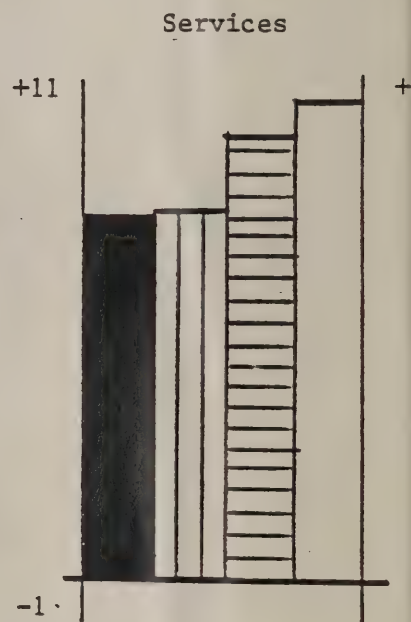
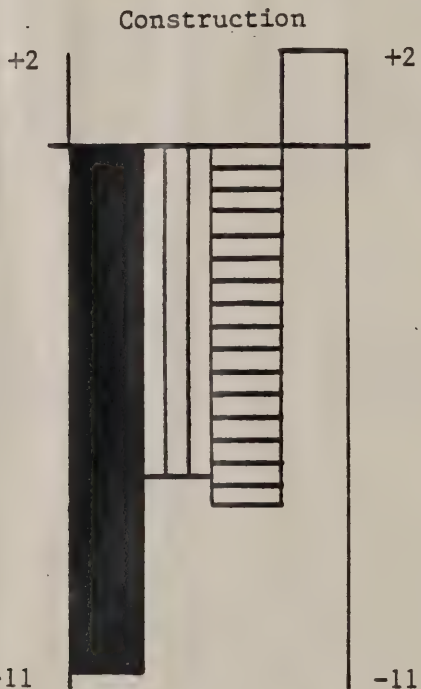
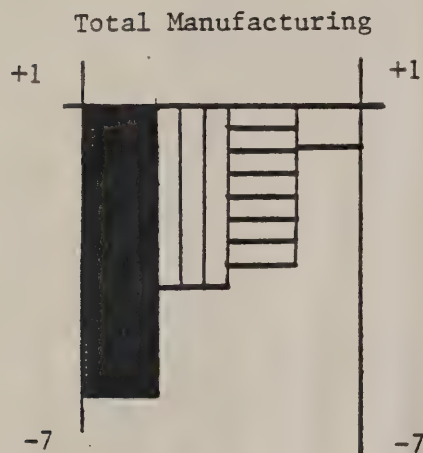
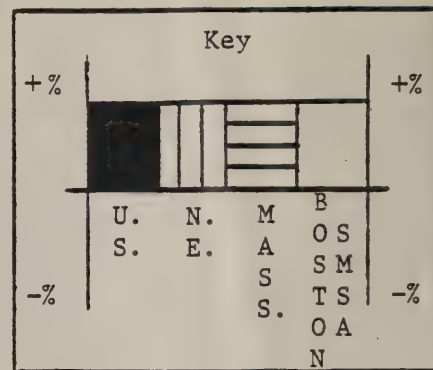
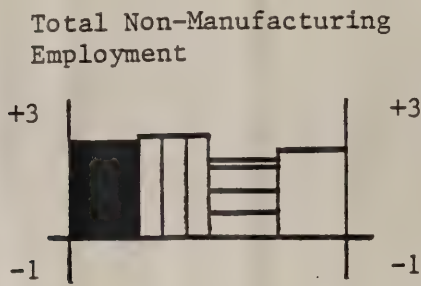
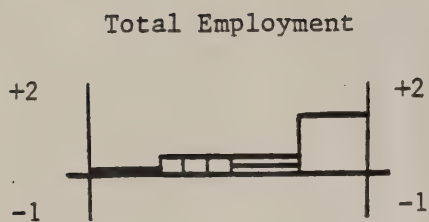
| | <u>Total</u> | | |
|---------------|---|---------------------|---------------------------------------|
| | <u>Non-Manufacturing Employment</u> | <u>Construction</u> | <u>Wholesale and Retail Trade</u> |
| United States | +2.1% | -11.6% | +1.7% |
| New England | +2.2% | -7.3% | +2.4% |
| Massachusetts | +1.7% | -7.9% | +2.0% |
| Boston SMSA | +1.9% | +2.1% | +1.0% |

| | <u>Services</u> | | <u>Government</u> |
|---------------|-----------------|--|-------------------|
| | | | |
| United States | +8.0% | | -0.9% |
| New England | +8.1% | | -5.9% |
| Massachusetts | +9.7% | | -10.9% |
| Boston SMSA | +10.5% | | -10.7% |

Source: Compiled from U.S. 790 Series of Non-Agricultural Employment (Monthly, Not Seasonally Adjusted), U.S. Bureau of Labor Statistics, Massachusetts Division of Employment Security.

Chart 1

PERCENT CHANGE OF EMPLOYMENT, JAN. 1980-JAN. 1982,
BY INDUSTRY, FOR U.S., N.E., MASS., AND BOSTON S.M.S.A.



The 1981-1982 recession, however, is more severe and reflects marked employment declines for all areas including the metropolitan Boston economy.

The improved economic position of metropolitan Boston stems from the long-term transformation to a more modern, stable, and growing economy. The predominance of services-related industries in the local economy and the emergence of fast-growing high-technology manufacturing industries provided the healthy employment growth from 1976-1980. The recessionary declines since January 1980 resulted from the slowdown in the manufacturing and construction industries and their consequences rippling throughout the whole economy. Thus, many of the differences among regional economies of the U.S. and their component metropolitan areas have been due to differential types of recessionary influences over the last two years. The Midwestern and Central regions, the heavy industry centers of the national economy, have accordingly borne the brunt of employment losses. Similarly, the newer and emerging industrialized areas of the South, Southwest, and West have also shown setbacks in both manufacturing and construction. New England, with its rapidly expanding high technology industry, a more favored machinery and equipment industry, and broadly expanding services activities, has weathered the recessionary period relatively well to date. The better performance of metropolitan Boston, nevertheless, somewhat shadows problems in other smaller cities and rural areas. These results were in evidence through June 1981.

Since June 1981, most of the component economies of the New England Region have shown employment losses similar to the U.S. experience. New England regional and component area declines are slightly less than the

U.S. rates but the relative experience seems to be less advantageous than 1980. The 1981-82 recession is deeper than the previous one with a much more wide ranging effect on the full scope of industries.

Moderating growth in the trade and services sectors are compounding manufacturing, government, and construction declines although the summer to winter time period may have emphasized this impact.

Preliminary employment results for the City of Boston, available only through June 1981, are compiled in a different series than the one used in this paper^{*} (Summary Table C). Boston employment over the eighteen-month time period was stronger in construction, non-durable manufacturing, transportation, communication, and public utilities, and finance compared to the performance of other areas outside of the Boston metropolitan area. Conversely, Boston employment was weaker in durable manufacturing, trade and services. Government employment showed mixed results among federal, state, and local sectors. Federal and local employment losses were somewhat offset by state government gains. Generally, the rate of growth of Boston employment was slightly smaller than the other areas: 84 percent of U.S., 71 percent of New England, and 64 percent of both Massachusetts and the metropolitan area. Despite both a period of recession and recovery through the eighteen months from

* There is no "790" series of non-agricultural employment for cities and towns. Instead, the ES-202 series of the Massachusetts Division of Employment Security is used for Boston; June 1980 is the latest available month.

SUMMARY TABLE C

CITY OF BOSTON COMPARISONS*: PERCENT CHANGE IN EMPLOYMENT
JANUARY 1980 - JUNE 1981

| Area | Industry Type | | | | |
|-----------------|---------------------|------------------------|--------------------------------|------------------------------------|------------------------------------|
| | Total Employment | Total Manufacturing | Manufacturing Durable Goods | Manufacturing Non-Durable Goods | Manufacturing Non-Durable Goods |
| United States | +3.2% | -1.2% | -2.1% | +0.2% | |
| New England | +3.8% | -0.8% | -0.5% | -1.4% | |
| Massachusetts | +4.2% | 0% | +0.7% | -1.1% | |
| Boston SMSA | +4.2% | +0.6% | +0.7% | +0.5% | |
| City of Boston* | +2.7% | -1.4% | -5.7% | +1.2% | |

| | Total | | | |
|----------------|---------------------------------|--------------|-------------------------------|--------------------------------|
| | Non-Manufacturing Employment | Construction | Wholesale and Retail Trade | TCPU and Finance Government |
| United States | +4.5% | +6.7% | +2.3% | +2.6% |
| New England | +5.7% | +9.6% | +5.3% | +5.8% |
| Massachusetts | +5.7% | +4.8% | +5.6% | +6.8% |
| Boston SMSA * | +5.1% | +16.7% | +2.3% | +0.2% |
| City of Boston | +3.1% | +12.1% | +0.9% | +6.1% |
| | | | +3.4% | Total(+0.5%) |
| | | | | Fed.(-2.4%) |
| | | | | State(+6.3%) |
| | | | | Local(-3.0%) |

* Comparison is not exact because City of Boston Employment is a count of employees covered by the Unemployment Insurance (ES-202) program while for the other areas employment is from a series on total Non-Agricultural Employment (790 Series). Both series are not seasonally adjusted.

Sources: U.S. Bureau of Labor Statistics and Massachusetts Division of Employment Security, 1980-1981.

January 1980 through July 1981, Boston actually fared quite well. In comparison to other areas, Boston did relatively as well as during the 1976-1980 growth period and definitely better than the earlier 1970-1976 period of decline.

Analyses show that Boston's advancing construction industry has been contrary to the national trend while transportation, finance, and non-durable manufacturing sectors have shown significant strengths. On the weaker side, wholesale and retail trade lag other areas as expected, durable manufacturing declines are notably worse, while services surprisingly shows some weakness although still staying in the plus column. Boston government employment is marginally higher. A large gain in state employment through June '81 shadowed significant losses in both federal and local government employment. While these preliminary results look good for Boston, the late 1981 recessionary effect has not yet been weighed since information is available only through June. Chances are that the recession will have a continuing effect on the City through 1982 although Boston's relative standing may not be as bad as 1975.

Two-year trends in total employment reveal the comparatively superior performance of the Boston metropolitan area over the course of both periods of recession and recovery. The performance of the City through June 1981 had been good although less vigorous than that of the metropolitan area. The composition of industry trends in Boston is revealing. The distinctly separate patterns of industry growth and decline among the four component geographic areas of New England are reviewed in the next sections of this report.

TABLE 1
TOTAL EMPLOYMENT

MONTHLY: JANUARY 1980 - JANUARY 1982
(NOT SEASONALLY ADJUSTED)
(EMPLOYMENT IN THOUSANDS)

| YEAR& MONTH | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA | %N.E./ U.S. | %MASS/ U.S. | %SMSA/ U.S. |
|----------------|------------------|----------------|---------|----------------|----------------|----------------|----------------|
| 1980 JAN. | 89,630 | 5,373.3 | 2,592.7 | 1,455.9 | 5.99 | 2.89 | 1.62 |
| FEB. | 89,781 | 5,389.0 | 2,612.4 | 1,455.6 | 6.00 | 2.91 | 1.62 |
| MAR. | 90,316 | 5,428.1 | 2,633.2 | 1,469.1 | 6.01 | 2.92 | 1.63 |
| APR. | 90,761 | 5,474.0 | 2,658.3 | 1,483.0 | 6.03 | 2.93 | 1.63 |
| MAY. | 90,849 | 5,503.6 | 2,664.8 | 1,483.1 | 6.06 | 2.93 | 1.63 |
| JUN. | 90,955 | 5,542.7 | 2,678.4 | 1,494.6 | 6.09 | 2.94 | 1.64 |
| JUL. | 89,711 | 5,435.0 | 2,626.9 | 1,464.8 | 6.06 | 2.93 | 1.63 |
| AUG. | 89,969 | 5,471.8 | 2,646.2 | 1,462.6 | 6.08 | 2.94 | 1.63 |
| SEP. | 90,638 | 5,483.3 | 2,641.1 | 1,467.5 | 6.05 | 2.91 | 1.62 |
| OCT. | 91,244 | 5,516.1 | 2,664.6 | 1,475.2 | 6.05 | 2.92 | 1.62 |
| NOV. | 91,599 | 5,534.0 | 2,677.6 | 1,489.0 | 6.04 | 2.92 | 1.63 |
| DEC. | 91,750 | 5,542.1 | 2,677.6 | 1,492.7 | 6.04 | 2.92 | 1.63 |
| 1981 JAN. | 89,988 | 5,418.8 | 2,609.6 | 1,452.4 | 6.02 | 2.90 | 1.61 |
| FEB. | 90,138 | 5,438.1 | 2,629.1 | 1,464.5 | 6.03 | 2.92 | 1.62 |
| MAR. | 90,720 | 5,467.7 | 2,652.3 | 1,476.9 | 6.03 | 2.92 | 1.63 |
| APR. | 91,337 | 5,506.5 | 2,682.1 | 1,495.6 | 6.03 | 2.94 | 1.64 |
| MAY. | 91,848 | 5,537.3 | 2,691.6 | 1,502.9 | 6.03 | 2.93 | 1.64 |
| JUN. | 92,481 | 5,577.3 | 2,702.4 | 1,517.3 | 6.03 | 2.92 | 1.64 |
| JUL. | 91,600 | 5,470.1 | 2,632.1 | 1,483.2 | 5.97 | 2.87 | 1.62 |
| AUG. | 91,598 | 5,502.6 | 2,658.4 | 1,490.7 | 6.01 | 2.90 | 1.63 |
| SEP. | 92,159 | 5,510.3 | 2,655.0 | 1,493.1 | 5.98 | 2.88 | 1.62 |
| OCT. | 92,424 | 5,532.9 | 2,681.0 | 1,504.0 | 5.99 | 2.90 | 1.63 |
| NOV. | 92,272 | 5,526.8 | 2,685.0 | 1,515.3 | 5.99 | 2.91 | 1.64 |
| DEC. | 91,932 | 5,552.8 | 2,690.5 | 1,520.0 | 6.04 | 2.93 | 1.65 |
| 1982 JAN. | 89,760 | 5,397.0 | 2,602.0 | 1,475.0 | 6.01 | 2.90 | 1.64 |
| 1980 AVG. | 90,600 | 5,474.4 | 2,647.8 | 1,474.4 | 6.04 | 2.92 | 1.63 |
| 1981 AVG. | 91,541 | 5,503.4 | 2,664.1 | 1,493.0 | 6.01 | 2.91 | 1.63 |

SOURCE: 790 SERIES OF NON-AGRICULTURAL EMPLOYMENT.
U.S. BUREAU OF LABOR STATISTICS, MASSACHUSETTS DIVISION OF
EMPLOYMENT SECURITY, 1980-1982. COMPILED BY B.R.A. RESEARCH
DEPARTMENT, MARCH 1982.

NOTE: 1980 MONTHLY EMPLOYMENT REVISED BENCHMARK SERIES FOR ALL AREAS.
1981 EMPLOYMENT UNREVISED UNTIL BENCHMARKED FOR ALL AREAS.
1982 EMPLOYMENT PRELIMINARY AND UNREVISED.

TABLE 2
TOTAL EMPLOYMENT

PERCENT CHANGE: 1980 - 1982
U.S., NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

A. PERCENT CHANGE FROM JANUARY 1980

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|--------------------------------|---------------|-------------|-------|-------------|
| SIX MONTHS: JAN80 - JUL80 | 0.1% | 1.1% | 1.3% | 0.6% |
| EIGHTEEN MONTHS: JAN80 - JUL81 | 2.2% | 1.8% | 1.5% | 1.9% |
| TWO YEARS: JAN80 - JUL82 | 0.1% | 0.4% | 0.4% | 1.3% |

B. PERCENT CHANGE DURING THREE INTERVALS, 1980 - 1981

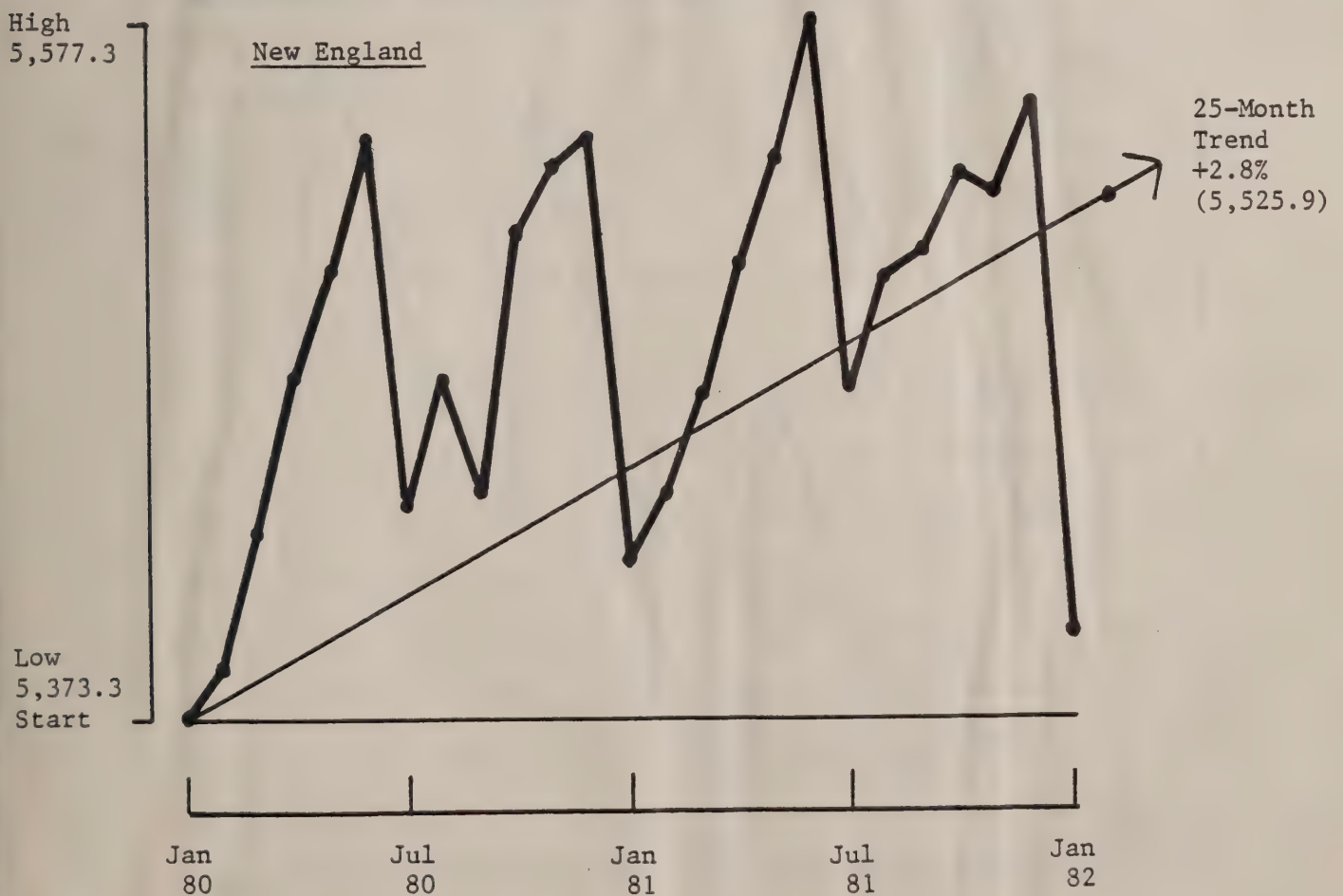
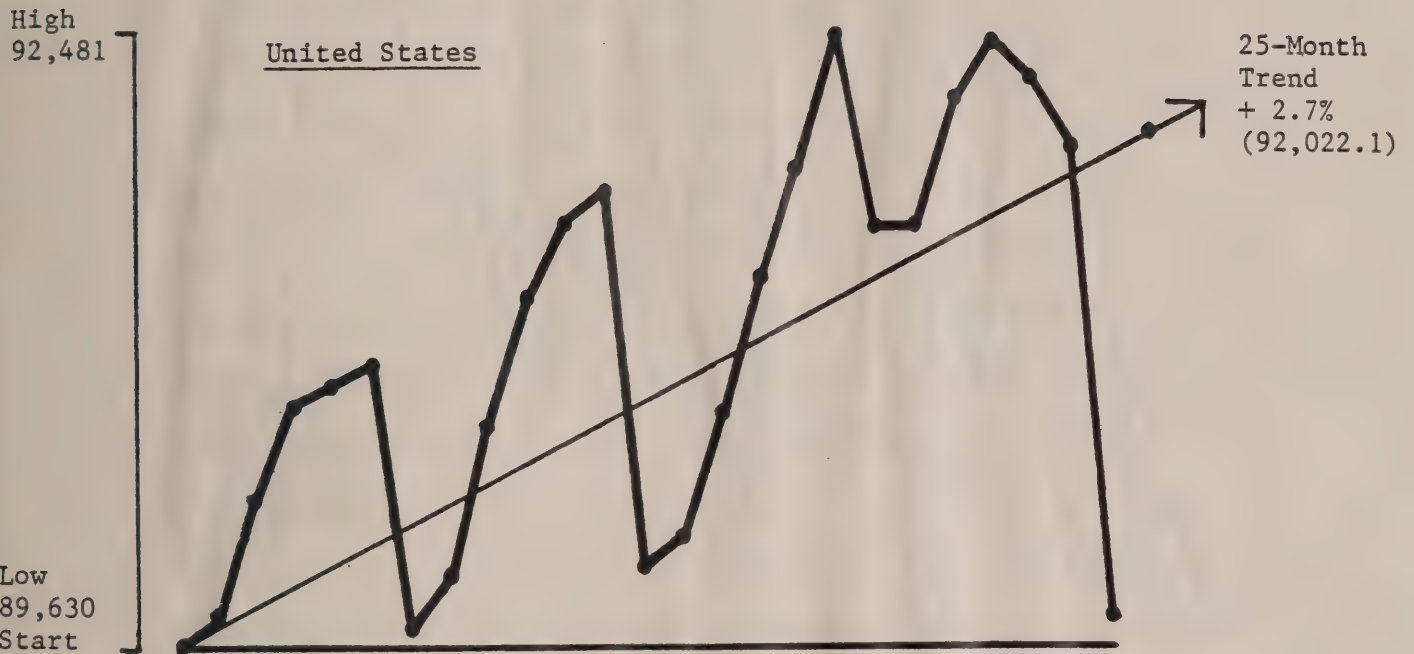
| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|-----------------------------------|---------------|-------------|--------|-------------|
| RECESSION 1980: JAN80 - JUL80 * | 0.1% | 1.1% | 1.3% | 0.6% |
| RECOVERY 1980-1981: JUL80 - JUL81 | 2.1% | 0.6% | 0.2% | 1.3% |
| RECESSION 1981: JUL81 - JAN82 * | - 2.0% | - 1.3% | - 1.1% | - 0.6% |

SOURCE: B.R.A. RESEARCH DEPARTMENT
FROM 790 NON-AGRICULTURAL EMPLOYMENT SERIES
SEE TABLE 1

NOTE: FOR PURPOSES OF CONSISTENCY JANUARY AND JULY ARE USED
BECAUSE THEY BOTH REPRESENT PERIODS OF EMPLOYMENT TROUGHS
IN SEASONALLY UNADJUSTED EMPLOYMENT SERIES.

* NOTE: THE 1980 RECESSION MAY BE SLIGHTLY UNDERSTATED AND THE 1981 RECESSION SLIGHTLY OVERSTATED BECAUSE SEASONAL VARIATION IN VARIOUS INDUSTRIES (CONSTRUCTION, MANUFACTURING, TRADE, AND SERVICES) RESULTS IN HIGHER EMPLOYMENT TOTALS IN JULY THAN IN JANUARY EVEN DURING REGULAR ECONOMIC TIMES.

MONTHLY TREND IN TOTAL EMPLOYMENT, 1980-1981



MONTHLY TREND IN TOTAL EMPLOYMENT, 1980-1981

High
2,702.4

Massachusetts

Low
1,592.7
Start

25-Month
Trend
+ 3.1%
(2,673.2)

High
1,520.0

Boston S.M.S.A.

1,455.9
Start

25-Month
Trend
+ 3.5%
(1,506.8)

Low
1,452.4

Jan 80 Jul 80 Jan 81 Jul 81 Jan 82

III. MANUFACTURING EMPLOYMENT

Manufacturing employment has consistently shown the most drastic declines of any industry grouping, both in the Nation and the New England Region, over the whole two year time span, January 1980 through January 1982. Manufacturing employment in the Nation had barely recovered to the levels of 1969, following the recessions of the early and mid-1970s, when it began to decline anew in 1980 and 1981. It is important to follow manufacturing trends because these industries have such widespread and extensive interactions with other industries in the whole economy.

Over the last two years the automobile, steel, and household appliance industries have suffered from inflationary materials costs, high interest rates, foreign competition, and slack demand and experienced substantial declines in employment. In contrast, the non-durable or "soft goods" industries, such as food, clothing, and paper have shown only marginal losses over the two-year span. Nevertheless, most manufacturing industries have shown losses over the 25-month span.

The pattern and depth of the manufacturing employment decline in the U.S. economy and the component areas of the New England region differ. Because of their distinctive industrial structures, durable manufacturing employment losses in the U.S. economy as a whole, heavily weighted by the industrial Midwestern areas, were severe, while the impact on New England was more moderate. This was true in the 1980 setback and continues to be the case in the 1981-1982 downturn. In fact, durable manufacturing employment levels in Massachusetts and metropolitan Boston were virtually steady over the last half of 1981,

and marked by only a marginal overall loss since January 1980. This results, in part, from the less vulnerable structure of Boston area durable manufactures with their concentration on high technology industry and machinery and equipment, in contrast to the role of autos, consumer durables, and heavy industry in the Midwest. The dominance of the metropolitan economy by computer equipment, instruments, electrical equipment, printing, chemicals/plastics, and such less vulnerable "recession-effected" industries has insulated the area from the more severe employment losses of other regions. Although there were signals of some softening in high-technology employment for selected industries during Spring 1982, the relative stability of manufacturing in the Boston area and New England, in the last two years, has favored the regional economy.

Non-durable manufacturing employment has also experienced recessionary losses since January 1980 in all areas. Over the full two-year time span, New England (-5.4 percent) and Massachusetts (-6.4 percent) losses were greater than those for the United States (-3.8 percent) and metropolitan Boston (-2.2 percent). The non-durable (soft goods) industries exhibited recessionary declines in response to slackening consumer demand but these were smaller than the fall in employment in durable manufacturing industries.

In summary, the experience of manufacturing employment has been poor over the last two years for the national, regional, and metro area economies. The 1980 recession was quite severe for manufacturing industries although short in duration. Losses from that period were never really regained during the year-long recovery which followed. The current recession has already cast off most gains made during the year-

long recovery and is causing even greater losses. The manufacturing setback for Boston was not as severe as those of the other areas. This indicates that the manufacturing sector in Boston, centered in printing and publishing, apparel, machinery and equipment and instruments, has achieved a stronger and more resilient base enabling it to better withstand rough economic times and to attain future gains in periods of growth. When the 1981-1982 recession is ended a more thorough assessment can be made, but all current signs point to improvement in the structure and performance of the City's manufacturing economy.

TABLE 3
DURABLE MANUFACTURING EMPLOYMENT

MONTHLY: JANUARY 1980 - JANUARY 1982
(NOT SEASONALLY ADJUSTED)
(EMPLOYMENT IN THOUSANDS)

| YEAR& MONTH | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA | %N.E./ U.S. | %MASS/ U.S. | %SMSA U.S. |
|----------------|------------------|----------------|-------|----------------|----------------|----------------|---------------|
| 1980 JAN. | 12,600 | 954.8 | 412.3 | 199.9 | 7.58 | 3.27 | 1.59 |
| FEB. | 12,599 | 954.6 | 412.5 | 199.9 | 7.58 | 3.27 | 1.59 |
| MAR. | 12,647 | 959.4 | 414.1 | 200.5 | 7.59 | 3.27 | 1.59 |
| APR. | 12,414 | 959.4 | 415.4 | 200.6 | 7.73 | 3.35 | 1.62 |
| MAY. | 12,150 | 952.2 | 412.0 | 200.2 | 7.84 | 3.39 | 1.65 |
| JUN. | 12,036 | 951.3 | 412.3 | 201.0 | 7.90 | 3.43 | 1.67 |
| JUL. | 11,743 | 928.8 | 403.3 | 196.8 | 7.91 | 3.43 | 1.68 |
| AUG. | 11,796 | 926.6 | 404.3 | 194.7 | 7.86 | 3.43 | 1.65 |
| SEP. | 11,990 | 934.7 | 406.0 | 196.0 | 7.80 | 3.39 | 1.63 |
| OCT. | 12,061 | 935.4 | 406.2 | 196.1 | 7.76 | 3.37 | 1.63 |
| NOV. | 12,156 | 940.1 | 408.5 | 196.4 | 7.73 | 3.36 | 1.62 |
| DEC. | 12,147 | 944.6 | 409.9 | 196.8 | 7.78 | 3.37 | 1.62 |
| 1981 JAN. | 12,072 | 941.6 | 408.2 | 196.3 | 7.80 | 3.38 | 1.63 |
| FEB. | 12,042 | 941.6 | 408.9 | 196.1 | 7.82 | 3.40 | 1.63 |
| MAR. | 12,120 | 942.1 | 409.6 | 197.1 | 7.77 | 3.38 | 1.63 |
| APR. | 12,197 | 944.6 | 413.3 | 198.4 | 7.74 | 3.39 | 1.63 |
| MAY. | 12,235 | 940.5 | 410.6 | 198.9 | 7.69 | 3.36 | 1.63 |
| JUN. | 12,334 | 950.0 | 415.0 | 201.2 | 7.70 | 3.36 | 1.63 |
| JUL. | 12,198 | 925.6 | 402.1 | 196.8 | 7.59 | 3.30 | 1.61 |
| AUG. | 12,188 | 932.4 | 408.4 | 198.1 | 7.65 | 3.35 | 1.63 |
| SEP. | 12,292 | 937.5 | 408.5 | 198.7 | 7.63 | 3.32 | 1.62 |
| OCT. | 12,163 | 936.7 | 412.8 | 202.4 | 7.70 | 3.39 | 1.66 |
| NOV. | 11,999 | 933.1 | 412.9 | 202.4 | 7.78 | 3.44 | 1.69 |
| DEC. | 11,786 | 933.3 | 411.4 | 202.4 | 7.92 | 3.49 | 1.72 |
| 1982 JAN. | 11,572 | 924.9 | 405.9 | 199.2 | 7.99 | 3.51 | 1.72 |
| 1980 AVG. | 12,195 | 945.2 | 409.7 | 198.2 | 7.75 | 3.36 | 1.63 |
| 1981 AVG. | 12,136 | 938.2 | 410.1 | 199.1 | 7.73 | 3.38 | 1.64 |

SOURCE: 790 SERIES OF NON-AGRICULTURAL EMPLOYMENT.

U.S. BUREAU OF LABOR STATISTICS, MASSACHUSETTS DIVISION OF
EMPLOYMENT SECURITY, 1980-1982. COMPILED BY B.R.A. RESEARCH
DEPARTMENT, MARCH 1982.

NOTE: 1980 MONTHLY EMPLOYMENT REVISED BENCHMARK SERIES FOR ALL AREAS.
1981 EMPLOYMENT UNREVISED UNTIL BENCHMARKED FOR ALL AREAS.
1982 EMPLOYMENT PRELIMINARY AND UNREVISED.

TABLE 4
DURABLE MANUFACTURING EMPLOYMENT

PERCENT CHANGE: 1980 - 1982
U.S., NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

A. PERCENT CHANGE FROM JANUARY 1980

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|--------------------------------|---------------|-------------|-------|-------------|
| SIX MONTHS: JAN80 - JUL80 | -6.8% | -2.7% | -2.2% | -1.6% |
| EIGHTEEN MONTHS: JAN80 - JUL81 | -3.2% | -3.1% | -2.5% | -1.6% |
| TWO YEARS: JAN80 - JUL82 | -8.2% | -3.1% | -1.6% | -.4% |

B. PERCENT CHANGE DURING THREE INTERVALS, 1980 - 1981

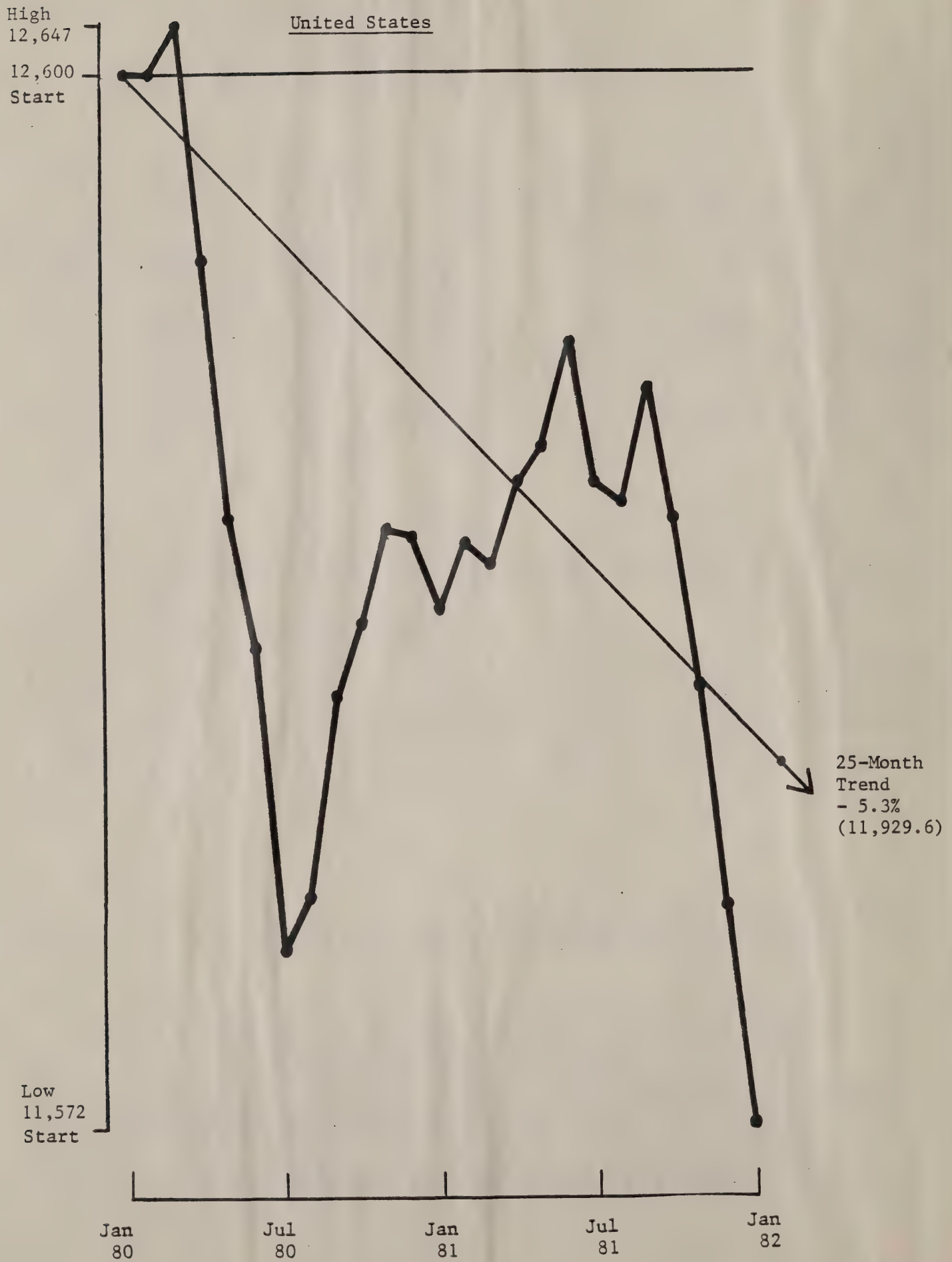
| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|-----------------------------------|---------------|-------------|-------|-------------|
| RECESSION 1980: JAN80 - JUL80 * | -6.8% | -2.7% | -2.2% | -1.6% |
| RECOVERY 1980-1981: JUL80 - JUL81 | 3.9% | -.3% | -.3% | 0.0% |
| RECESSION 1981: JUL81 - JAN82 * | -5.1% | -.1% | 0.9% | 1.2% |

SOURCE: B.R.A. RESEARCH DEPARTMENT
FROM 790 NON-AGRICULTURAL EMPLOYMENT SERIES
SEE TABLE 3

NOTE: FOR PURPOSES OF CONSISTENCY JANUARY AND JULY ARE USED
BECAUSE THEY BOTH REPRESENT PERIODS OF EMPLOYMENT TROUGHS
IN SEASONALLY UNADJUSTED EMPLOYMENT SERIES.

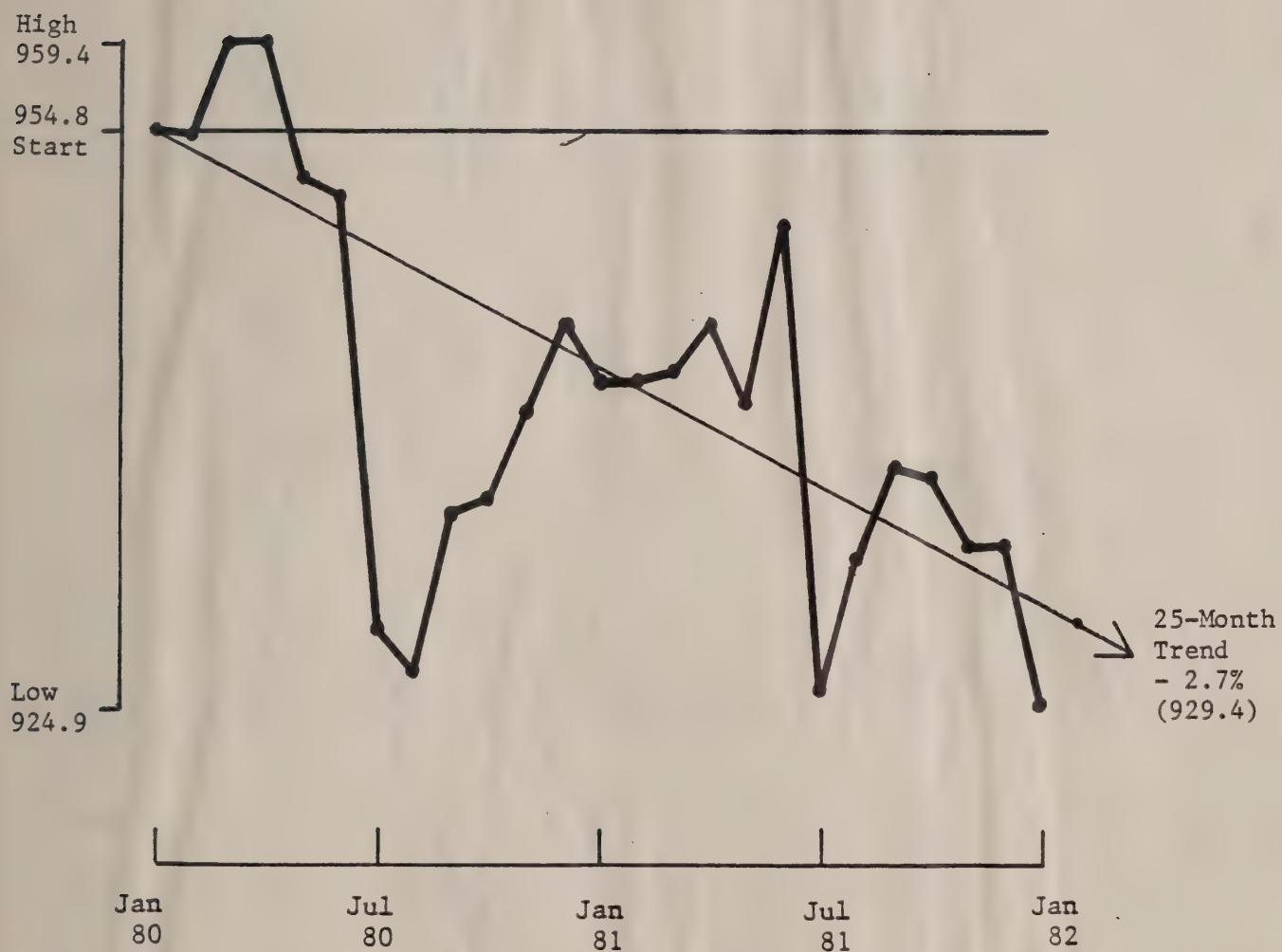
* NOTE: THE 1980 RECESSION MAY BE SLIGHTLY UNDERSTATED AND THE 1981 RECESSION SLIGHTLY OVERSTATED BECAUSE SEASONAL VARIATION IN VARIOUS INDUSTRIES (CONSTRUCTION, MANUFACTURING, TRADE, AND SERVICES) RESULTS IN HIGHER EMPLOYMENT TOTALS IN JULY THAN IN JANUARY EVEN DURING REGULAR ECONOMIC TIMES.

MONTHLY TREND IN DURABLE GOODS MANUFACTURING EMPLOYMENT,
1980-1981



MONTHLY TREND IN DURABLE GOODS MANUFACTURING EMPLOYMENT,
1980-1981

New England



MONTHLY TREND IN DURABLE GOODS MANUFACTURING EMPLOYMENT,
1980-1981

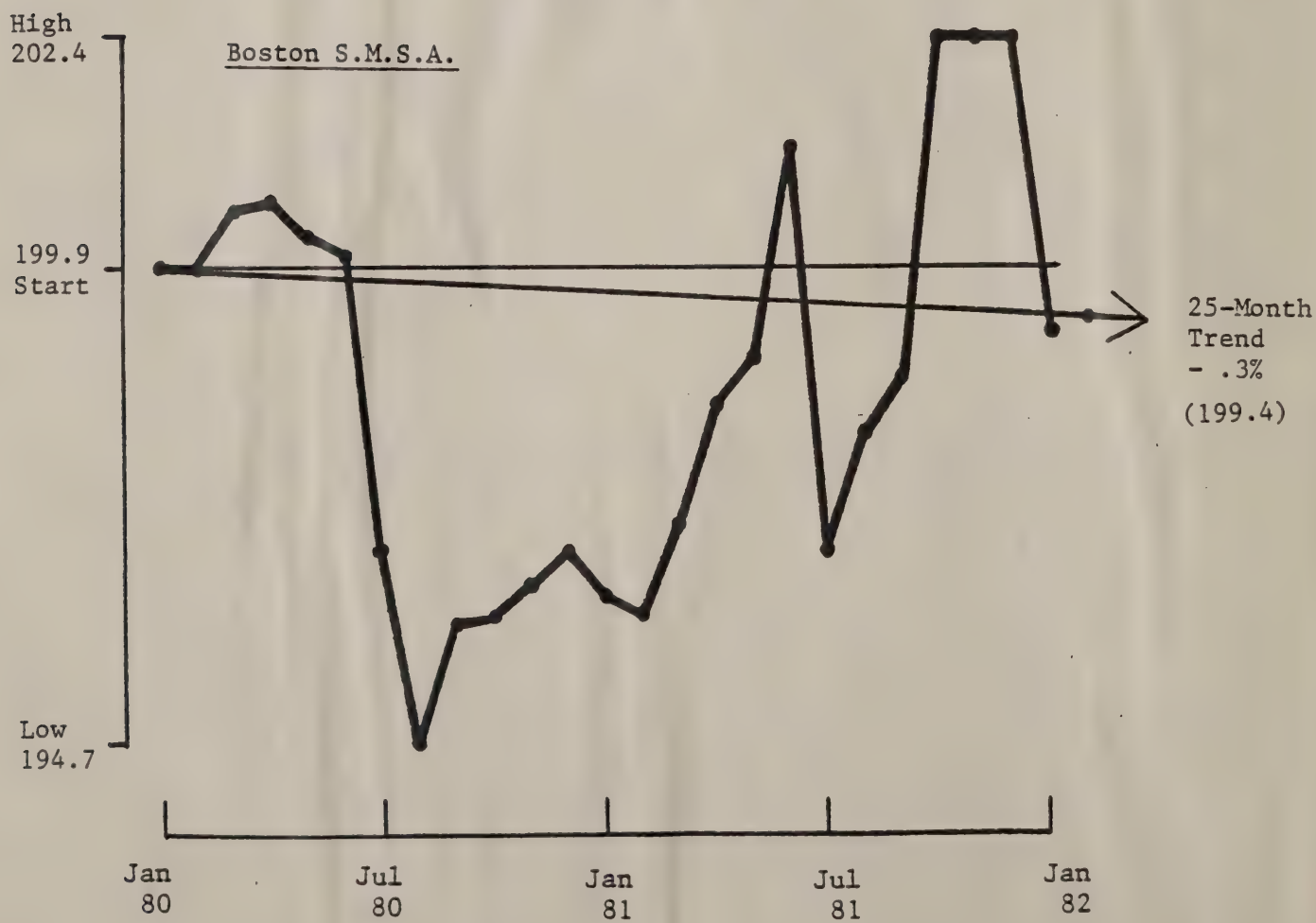
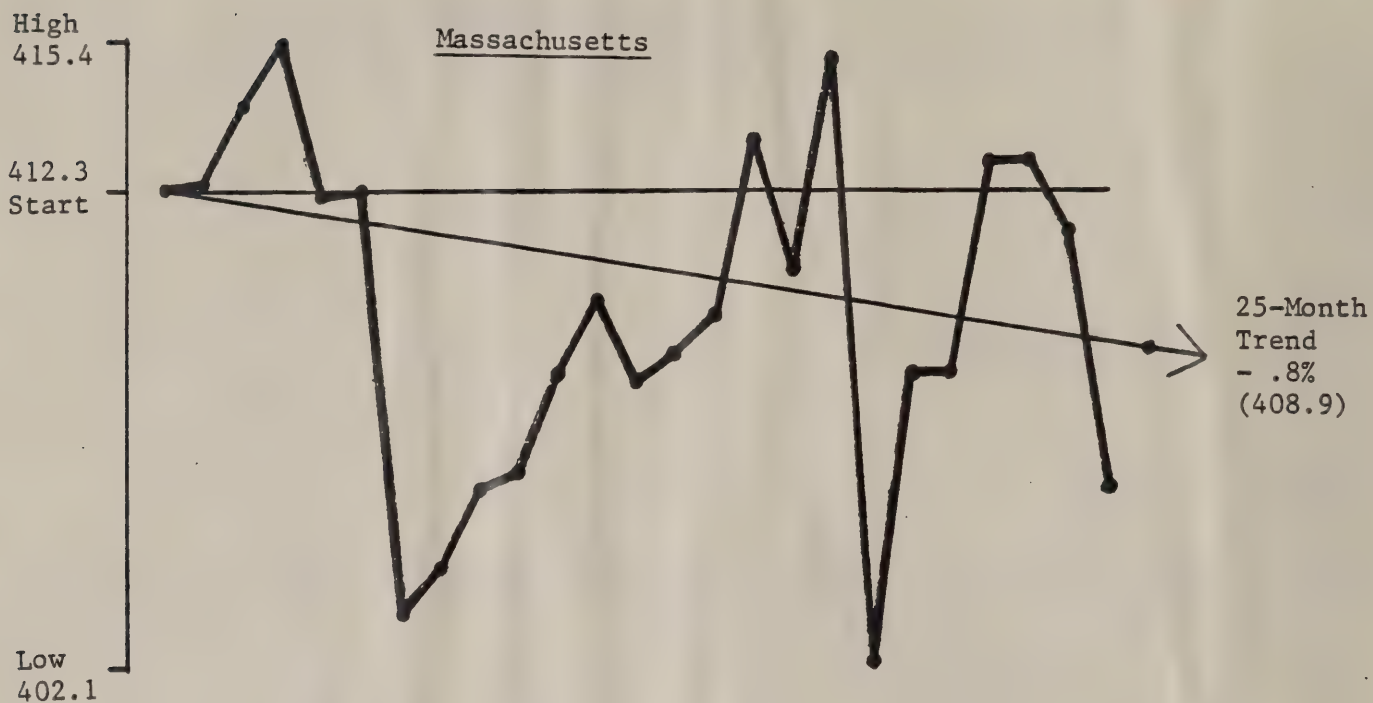


TABLE 5
NON-DURABLE MANUFACTURING EMPLOYMENT

MONTHLY: JANUARY 1980 - JANUARY 1982
(NOT SEASONALLY ADJUSTED)
(EMPLOYMENT IN THOUSANDS)

| YEAR & MONTH | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA | %N.E./ U.S. | %MASS/ U.S. | %SMSA/ U.S. |
|-----------------|------------------|----------------|-------|----------------|----------------|----------------|----------------|
| 1980 JAN. | 8,177 | 585.3 | 267.6 | 95.7 | 7.16 | 3.27 | 1.17 |
| FEB. | 8,131 | 584.8 | 267.7 | 95.8 | 7.19 | 3.29 | 1.18 |
| MAR. | 8,146 | 586.2 | 269.0 | 96.6 | 7.20 | 3.30 | 1.19 |
| APR. | 8,119 | 587.2 | 268.8 | 96.6 | 7.23 | 3.31 | 1.19 |
| MAY. | 8,100 | 583.6 | 266.7 | 96.5 | 7.20 | 3.29 | 1.19 |
| JUN. | 8,110 | 587.0 | 268.1 | 97.2 | 7.24 | 3.31 | 1.20 |
| JUL. | 7,959 | 540.6 | 251.2 | 94.8 | 6.79 | 3.16 | 1.19 |
| AUG. | 8,201 | 574.4 | 259.8 | 94.8 | 7.00 | 3.17 | 1.16 |
| SEP. | 8,222 | 575.6 | 260.0 | 94.7 | 7.00 | 3.16 | 1.15 |
| OCT. | 8,174 | 577.8 | 260.9 | 95.1 | 7.07 | 3.19 | 1.16 |
| NOV. | 8,137 | 580.1 | 261.4 | 94.9 | 7.13 | 3.21 | 1.17 |
| DEC. | 8,091 | 575.6 | 257.5 | 94.1 | 7.11 | 3.18 | 1.16 |
| 1981 JAN. | 8,003 | 568.1 | 255.6 | 93.1 | 7.10 | 3.19 | 1.16 |
| FEB. | 8,023 | 571.6 | 257.9 | 93.3 | 7.12 | 3.21 | 1.16 |
| MAR. | 8,040 | 567.9 | 257.7 | 94.0 | 7.06 | 3.21 | 1.17 |
| APR. | 8,056 | 568.4 | 258.4 | 94.0 | 7.06 | 3.21 | 1.17 |
| MAY. | 8,107 | 571.2 | 260.3 | 94.7 | 7.05 | 3.21 | 1.17 |
| JUN. | 8,197 | 577.3 | 264.7 | 96.2 | 7.04 | 3.23 | 1.17 |
| JUL. | 8,139 | 548.9 | 248.5 | 94.1 | 6.74 | 3.05 | 1.16 |
| AUG. | 8,285 | 573.3 | 258.2 | 95.1 | 6.92 | 3.12 | 1.15 |
| SEP. | 8,308 | 577.7 | 262.7 | 95.4 | 6.95 | 3.16 | 1.15 |
| OCT. | 8,205 | 575.9 | 262.8 | 95.6 | 7.02 | 3.20 | 1.17 |
| NOV. | 8,123 | 570.4 | 259.0 | 95.7 | 7.02 | 3.19 | 1.18 |
| DEC. | 8,018 | 561.6 | 253.6 | 95.0 | 7.00 | 3.16 | 1.18 |
| 1982 JAN. | 7,868 | 553.5 | 250.4 | 93.6 | 7.03 | 3.18 | 1.19 |
| 1980 AVG. | 8,131 | 578.2 | 263.2 | 95.6 | 7.11 | 3.24 | 1.18 |
| 1981 AVG. | 8,125 | 569.4 | 258.3 | 94.7 | 7.01 | 3.18 | 1.17 |

SOURCE: 790 SERIES OF NON-AGRICULTURAL EMPLOYMENT.
U.S. BUREAU OF LABOR STATISTICS, MASSACHUSETTS DIVISION OF
EMPLOYMENT SECURITY, 1980-1982. COMPILED BY B.R.A. RESEARCH
DEPARTMENT, MARCH 1982.

NOTE: 1980 MONTHLY EMPLOYMENT REVISED BENCHMARK SERIES FOR ALL AREAS.
1981 EMPLOYMENT UNREVISED UNTIL BENCHMARKED FOR ALL AREAS.
1982 EMPLOYMENT PRELIMINARY AND UNREVISED.

TABLE 6
NON-DURABLE MANUFACTURING EMPLOYMENT

PERCENT CHANGE: 1980 - 1982
U.S., NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

A. PERCENT CHANGE FROM JANUARY 1980

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|--------------------------------|---------------|-------------|-------|-------------|
| SIX MONTHS: JAN80 - JUL80 | -2.7% | -7.6% | -6.1% | - .9% |
| EIGHTEEN MONTHS: JAN80 - JUL81 | - .5% | -6.2% | -7.1% | -1.7% |
| TWO YEARS: JAN80 - JUL82 | -3.8% | -5.4% | -6.4% | -2.2% |

B. PERCENT CHANGE DURING THREE INTERVALS, 1980 - 1981

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|-----------------------------------|---------------|-------------|-------|-------------|
| RECESSION 1980: JAN80 - JUL80 * | -2.7% | -7.6% | -6.1% | - .9% |
| RECOVERY 1980-1981: JUL80 - JUL81 | 2.3% | 1.5% | -1.1% | - .7% |
| RECESSION 1981: JUL81 - JAN82 * | -3.3% | 0.8% | 0.8% | - .5% |

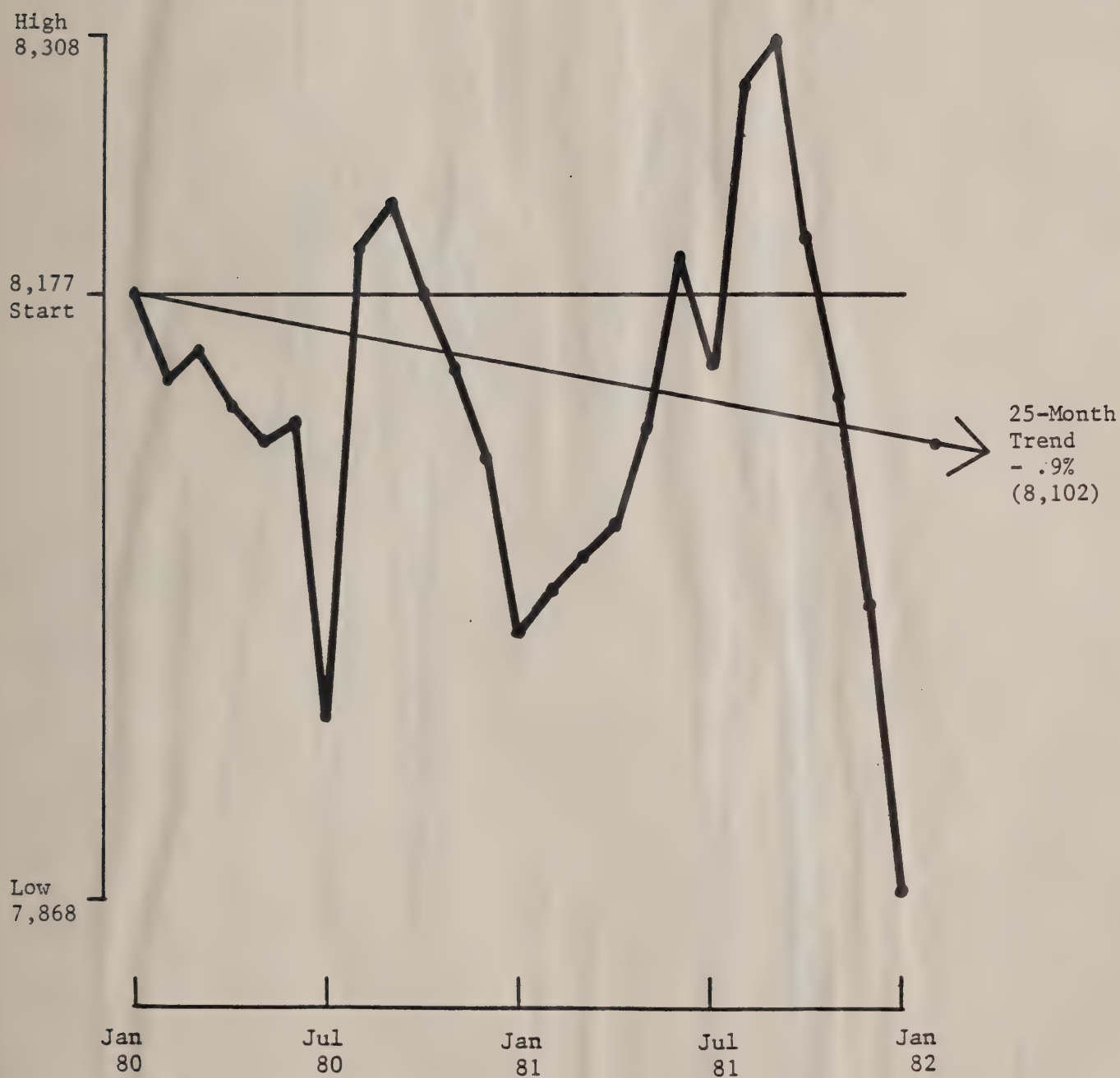
SOURCE: B.R.A. RESEARCH DEPARTMENT
FROM 790 NON-AGRICULTURAL EMPLOYMENT SERIES
SEE TABLE 5

NOTE: FOR PURPOSES OF CONSISTENCY JANUARY AND JULY ARE USED
BECAUSE THEY BOTH REPRESENT PERIODS OF EMPLOYMENT TROUGHS
IN SEASONALLY UNADJUSTED EMPLOYMENT SERIES.

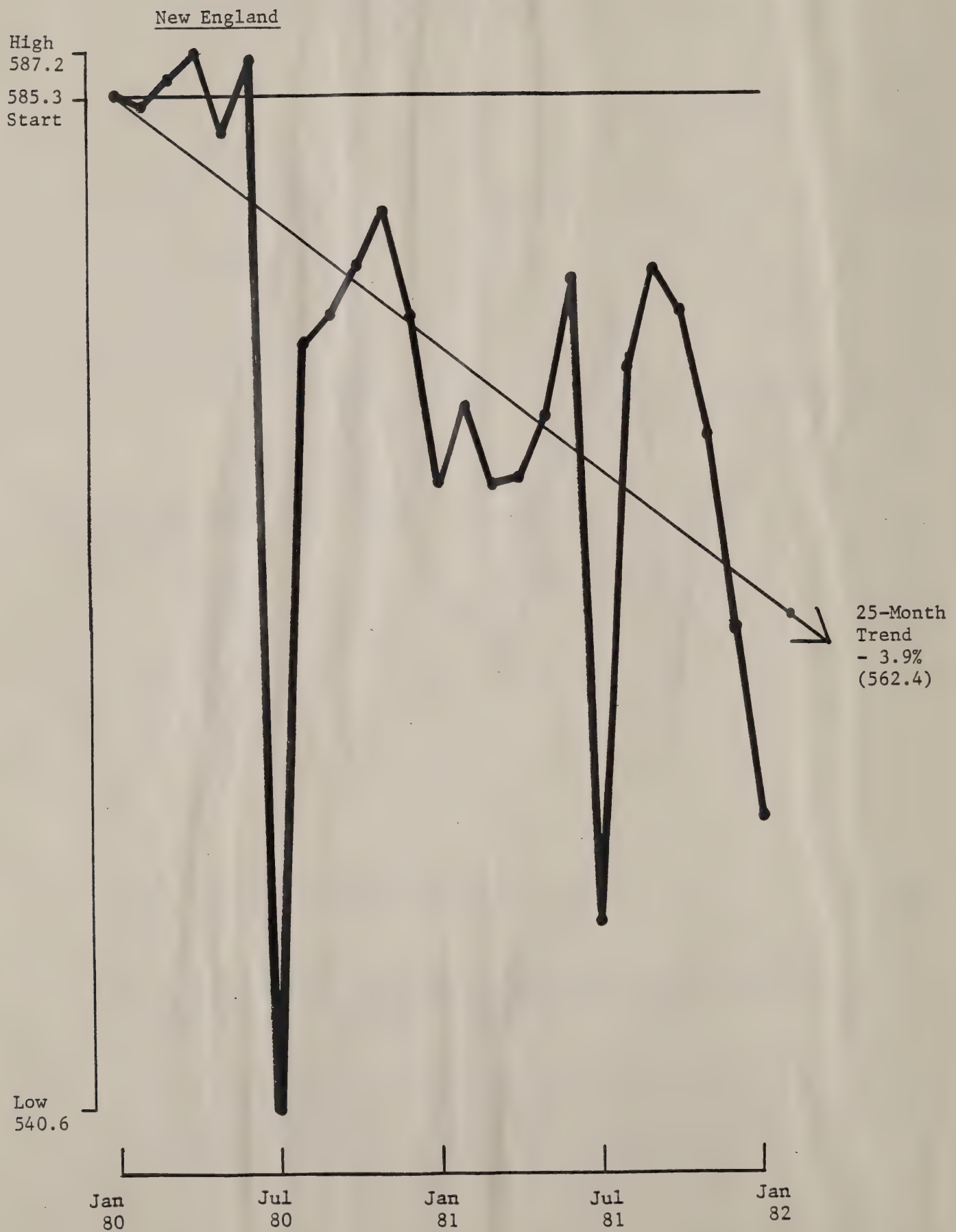
* NOTE: THE 1980 RECESSION MAY BE SLIGHTLY UNDERSTATED AND THE 1981 RECESSION SLIGHTLY OVERSTATED BECAUSE SEASONAL VARIATION IN VARIOUS INDUSTRIES (CONSTRUCTION, MANUFACTURING, TRADE, AND SERVICES) RESULTS IN HIGHER EMPLOYMENT TOTALS IN JULY THAN IN JANUARY EVEN DURING REGULAR ECONOMIC TIMES.

MONTHLY TREND IN NON-DURABLE GOODS MANUFACTURING EMPLOYMENT,
1980-1981

United States

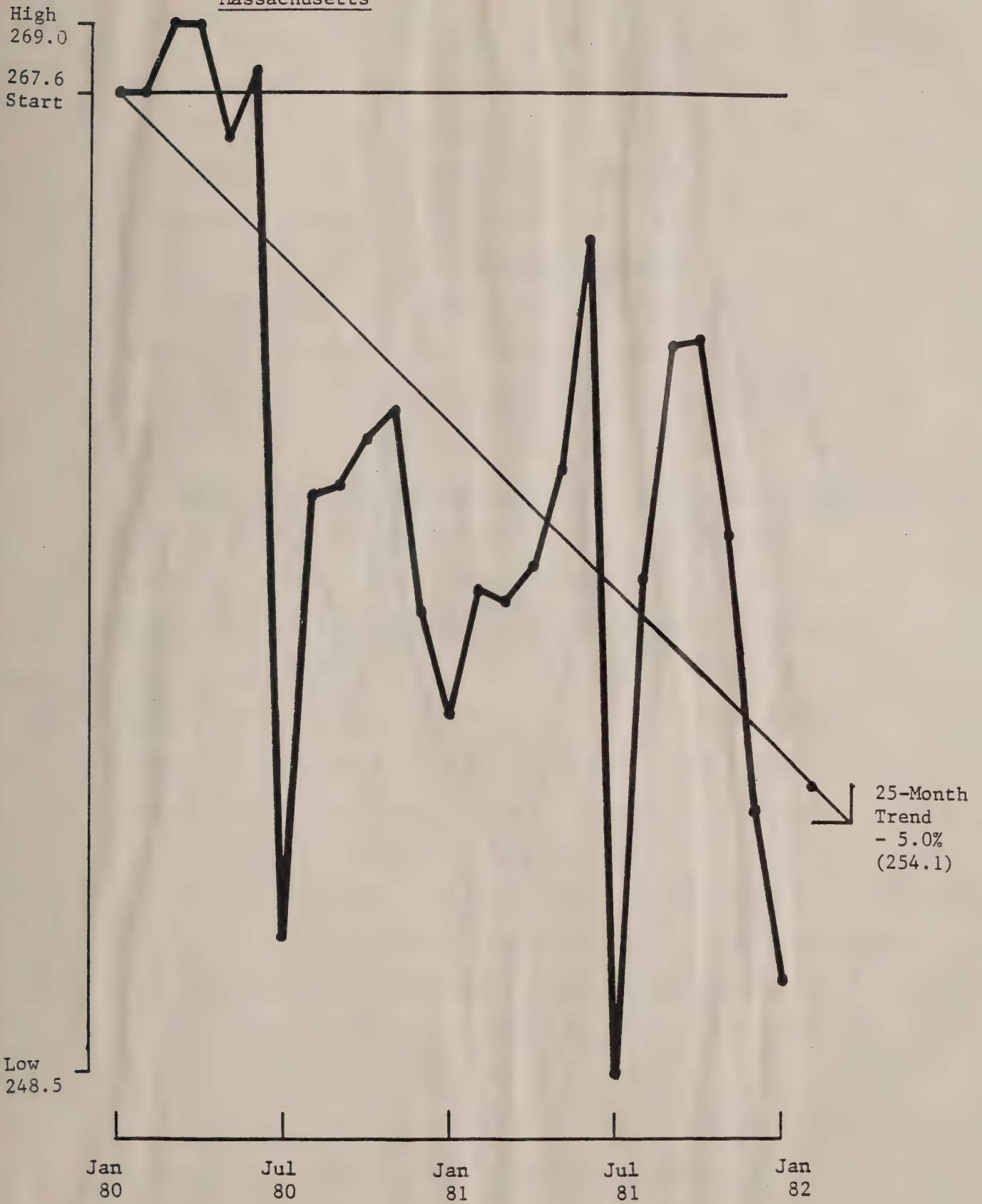


MONTHLY TREND IN NON-DURABLE GOODS MANUFACTURING EMPLOYMENT,
1980-1981

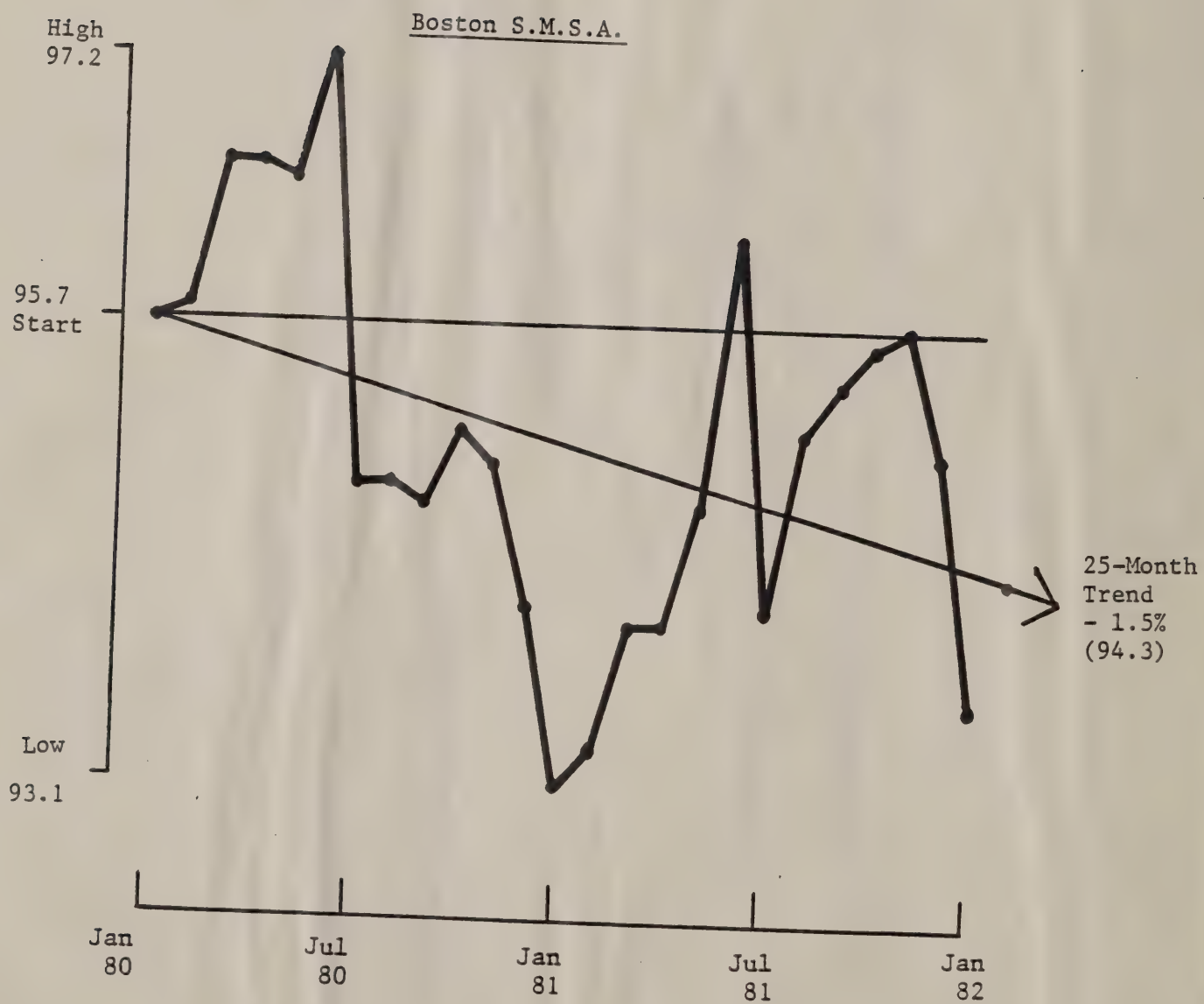


MONTHLY TREND IN NON-DURABLE GOODS MANUFACTURING EMPLOYMENT,
1980-1981

Massachusetts



MONTHLY TREND IN NON DURABLE GOODS MANUFACTURING EMPLOYMENT,
1980-1981



IV. NON-MANUFACTURING INDUSTRIES

The non-manufacturing sector, dominated by the broad-based services industries and government, but also including trade and construction, has displayed continued overall growth since January 1980 amidst the mixed trends of individual industries. Employment in the non-manufacturing sector of the economy, as a whole, increased for all four areas under study during the two-year time frame. For most of the areas, construction and government have shown employment losses while finance, transportation, trade and services have mainly shown gains. During the 1980 recession, the advances in non-manufacturing more than compensated for the losses in manufacturing and government. Total non-manufacturing also held strong during the year long recovery period although construction and government lagged in some regions. Employment in some of the stronger industries, however, has declined during the latest recession signalling a wider and deeper economic downturn in both the national economy and the component area economies of the region. Except for construction and trade which usually suffer losses during recessionary periods, non-manufacturing tends to remain comparatively strong since it is heavily weighted by the services industries which are less prone to recession.

Clearly, declining construction activity is one of the most notable features of the current national recession and is becoming increasingly more so for New England and Massachusetts. Caused primarily by the drastic slump in residential building, impacted by high interest rates, construction employment declines over the two-year period have been evident for the United States (-11.6 percent and 488,000 jobs), New England (-7.3 percent and 12,500 jobs), and Massachusetts (-7.9 percent

and 5,400 jobs). As building and manufacturing both slackened, construction activity was generally lower in 1981 than 1980 for the national, regional, and state economies. After peaking in Summer/Fall 1980 construction has consistently declined since that time. The last six months of 1981 showed a continuing fall but losses may be somewhat overstated due to seasonal factors. Nevertheless, the slump continues for these areas--particularly on the national level.

Metropolitan Boston, however, has shown trends just the reverse as construction employment was very strong in 1980 and held up during 1981 so that there were almost 1,000 more jobs by January 1982, a gain of 2.1 percent. Recent months have shown some weakness, but the relative strength over the two years is the result of a continued boom in commercial building. As measured through June 1981, the construction employment performance for the City of Boston and the Metropolitan Area surpassed that of the U.S., New England, and Massachusetts.

Wholesale and retail trade industries were not severely affected during the two years of sluggish economic growth, January 1980 through January 1982. Employment levels in trade showed shifting trends over the period, generally down during recessionary times and up during recovery times. Despite the setbacks in the two recessionary periods, January 1982 employment in all areas was up one to two percent above the level of January 1980. New England and Massachusetts (+2.4 percent and +2.0 percent) had the greatest gains while the U.S. and metropolitan Boston (1.7 percent and 1.0 percent) had smaller advances. The fact of overall gains indicates that the recessions (particularly 1980) have not been ones of slack consumer demand but rather ones more appropriately characterized by the slowdown in manufacturing production and

construction activity. The City of Boston, through June 1981, showed a small gain which contrasts sharply with large losses suffered during the 1974-1976 recession.

Services employment kept a strong pace of growth throughout 1980 and 1981 marked only by some slowdown late in 1981. Services employment in January 1982 was above its level from January 1980 by at least eight percent for each area. Over 1.4 million jobs in professional and business services were added in the U.S. and nearly 100,000 jobs in the New England economy as the respective totals grew by eight percent. and Massachusetts and metropolitan Boston services employment grew more rapidly, rising by 9.7 percent (58,000 jobs) and 10.5 percent (41,800 jobs), respectively. Services has been the fastest area of growth and the least affected by the recession because it contains a large grouping of the most dynamic industries in the modern economy--business, personal, professional, medical and educational activities. Similarly, financial, real estate, and public utility service industries, not shown separately in this analysis, have also continued at a rapid rate of growth.

Metropolitan Boston and the City have experienced pervasive growth in services employment during both the good and bad economic times since January 1980. Gains in metropolitan Boston, during 1980 and 1981, added 41,800 jobs to the economy. Finance, insurance, and real estate have been strong throughout. The City of Boston marked a gain in services, too, as employment rose by 3.4 percent through June 1981. Services, including the Finance/Transportation/Utilities sector, has proven to be the strongest growth sector of all, and may be the least affected as the recession continues.

A unique feature of the two recessions of the 1980s is the severe reduction in government employment. Government showed declining employment through mid-1981 in all component areas. Since July 1981, however, government employment, while rising in the U.S. and New England economies, after the period of decline, has continued to fall significantly in Massachusetts and metropolitan Boston. Over most of the two-year time frame, government employment losses were greater for Massachusetts (-10.9 percent and 44,400 jobs) and metropolitan Boston (-10.7 percent and 23,100 jobs) than for New England (-5.9 percent and 49,000 jobs) and the United States (-0.9 percent and 139,000 jobs).

In Massachusetts, metropolitan Boston and the City, government employment losses extended through January 1982. In Boston, government employment losses in federal (-2.4 percent) and local (-3.0 percent) sectors were just about matched by gains (+6.3 percent) at the state level. Budget cutbacks and falling revenues have forced the various government sectors to reduce employment. The combined impact of state and local tax limitation, federal budget cuts, and slow economic growth have limed government revenues and caused noticeably lowered government employment levels throughout the whole period.

In summary, non-manufacturing employment consists of a mix of mainly growing and some declining industries to differing degrees at the federal, state, and local levels. Through January 1982 the employment gains of the faster growing services sectors have largely outweighed the losers. There remains the possibility that if the recession were to continue for an extended period and if retail trade employment were to decline, the scales may be tipped back toward small or no growth in the

non-manufacturing industry grouping. The predominance of growing services, finance/insurance/real estate, and transportation/communication/utilities, however, continued to offset losses in some of the other sectors through early 1982 creating a strong and steady base of growth.

TABLE 7
TOTAL NON-MANUFACTURING EMPLOYMENT

MONTHLY: JANUARY 1980 - JANUARY 1982
(NOT SEASONALLY ADJUSTED)
(EMPLOYMENT IN THOUSANDS)

| YEAR& MONTH | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA | %N.E./ U.S. | %MASS/ U.S. | %SMSA/ U.S. |
|----------------|------------------|----------------|---------|----------------|----------------|----------------|----------------|
| 1980 JAN. | 68,853 | 3,833.2 | 1,912.8 | 1,160.3 | 5.57 | 2.78 | 1.69 |
| FEB. | 69,051 | 3,849.6 | 1,932.2 | 1,159.9 | 5.58 | 2.80 | 1.68 |
| MAR. | 69,523 | 3,882.5 | 1,950.1 | 1,172.0 | 5.58 | 2.80 | 1.69 |
| APR. | 70,228 | 3,927.4 | 1,974.1 | 1,185.8 | 5.59 | 2.81 | 1.69 |
| MAY. | 70,599 | 3,967.8 | 1,986.1 | 1,186.4 | 5.62 | 2.81 | 1.68 |
| JUN. | 70,809 | 4,004.4 | 1,998.0 | 1,196.4 | 5.66 | 2.82 | 1.69 |
| JUL. | 70,009 | 3,965.6 | 1,972.4 | 1,173.2 | 5.66 | 2.82 | 1.68 |
| AUG. | 69,972 | 3,970.8 | 1,982.1 | 1,173.1 | 5.67 | 2.83 | 1.68 |
| SEP. | 70,426 | 3,973.0 | 1,975.1 | 1,176.8 | 5.64 | 2.80 | 1.67 |
| OCT. | 71,009 | 4,002.9 | 1,997.5 | 1,184.0 | 5.64 | 2.81 | 1.67 |
| NOV. | 71,306 | 4,013.8 | 2,007.7 | 1,197.7 | 5.63 | 2.82 | 1.68 |
| DEC. | 71,512 | 4,021.9 | 2,010.2 | 1,201.8 | 5.62 | 2.81 | 1.68 |
| 1981 JAN. | 69,913 | 3,909.1 | 1,945.8 | 1,163.0 | 5.59 | 2.78 | 1.66 |
| FEB. | 70,073 | 3,924.9 | 1,962.3 | 1,175.1 | 5.60 | 2.80 | 1.68 |
| MAR. | 70,560 | 3,957.7 | 1,985.0 | 1,185.8 | 5.61 | 2.81 | 1.68 |
| APR. | 71,084 | 3,993.5 | 2,010.4 | 1,203.2 | 5.62 | 2.83 | 1.69 |
| MAY. | 71,506 | 4,025.6 | 2,020.7 | 1,209.3 | 5.63 | 2.83 | 1.69 |
| JUN. | 71,950 | 4,050.0 | 2,022.7 | 1,219.9 | 5.63 | 2.81 | 1.70 |
| JUL. | 71,263 | 3,995.6 | 1,981.5 | 1,192.3 | 5.61 | 2.78 | 1.67 |
| AUG. | 71,125 | 3,997.1 | 1,991.8 | 1,197.5 | 5.62 | 2.80 | 1.68 |
| SEP. | 71,559 | 3,995.1 | 1,983.8 | 1,199.0 | 5.58 | 2.77 | 1.68 |
| OCT. | 72,056 | 4,020.3 | 2,005.4 | 1,206.0 | 5.58 | 2.78 | 1.67 |
| NOV. | 72,171 | 4,023.3 | 2,013.1 | 1,217.2 | 5.57 | 2.79 | 1.69 |
| DEC. | 72,128 | 4,057.9 | 2,025.5 | 1,222.6 | 5.63 | 2.81 | 1.70 |
| 1982 JAN. | 70,320 | 3,918.6 | 1,945.7 | 1,182.2 | 5.57 | 2.77 | 1.68 |
| 1980 AVG. | 70,275 | 3,951.1 | 1,974.9 | 1,180.6 | 5.62 | 2.81 | 1.68 |
| 1981 AVG. | 71,282 | 3,995.8 | 1,995.7 | 1,199.2 | 5.61 | 2.80 | 1.68 |

SOURCE: 790 SERIES OF NON-AGRICULTURAL EMPLOYMENT.

U.S. BUREAU OF LABOR STATISTICS, MASSACHUSETTS DIVISION OF
EMPLOYMENT SECURITY, 1980-1982. COMPILED BY B.R.A. RESEARCH
DEPARTMENT, MARCH 1982.

NOTE: 1980 MONTHLY EMPLOYMENT REVISED BENCHMARK SERIES FOR ALL AREAS.
1981 EMPLOYMENT UNREVISED UNTIL BENCHMARKED FOR ALL AREAS.
1982 EMPLOYMENT PRELIMINARY AND UNREVISED.

TABLE 8
TOTAL NON-MANUFACTURING EMPLOYMENT

PERCENT CHANGE: 1980 - 1982
U.S., NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

A. PERCENT CHANGE FROM JANUARY 1980

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|--------------------------------|---------------|-------------|-------|-------------|
| SIX MONTHS: JAN80 - JUL80 | 1.7% | 3.5% | 3.1% | 1.1% |
| EIGHTEEN MONTHS: JAN80 - JUL81 | 3.5% | 4.2% | 3.6% | 2.8% |
| TWO YEARS: JAN80 - JUL82 | 2.1% | 2.2% | 1.7% | 1.9% |

B. PERCENT CHANGE DURING THREE INTERVALS, 1980 - 1981

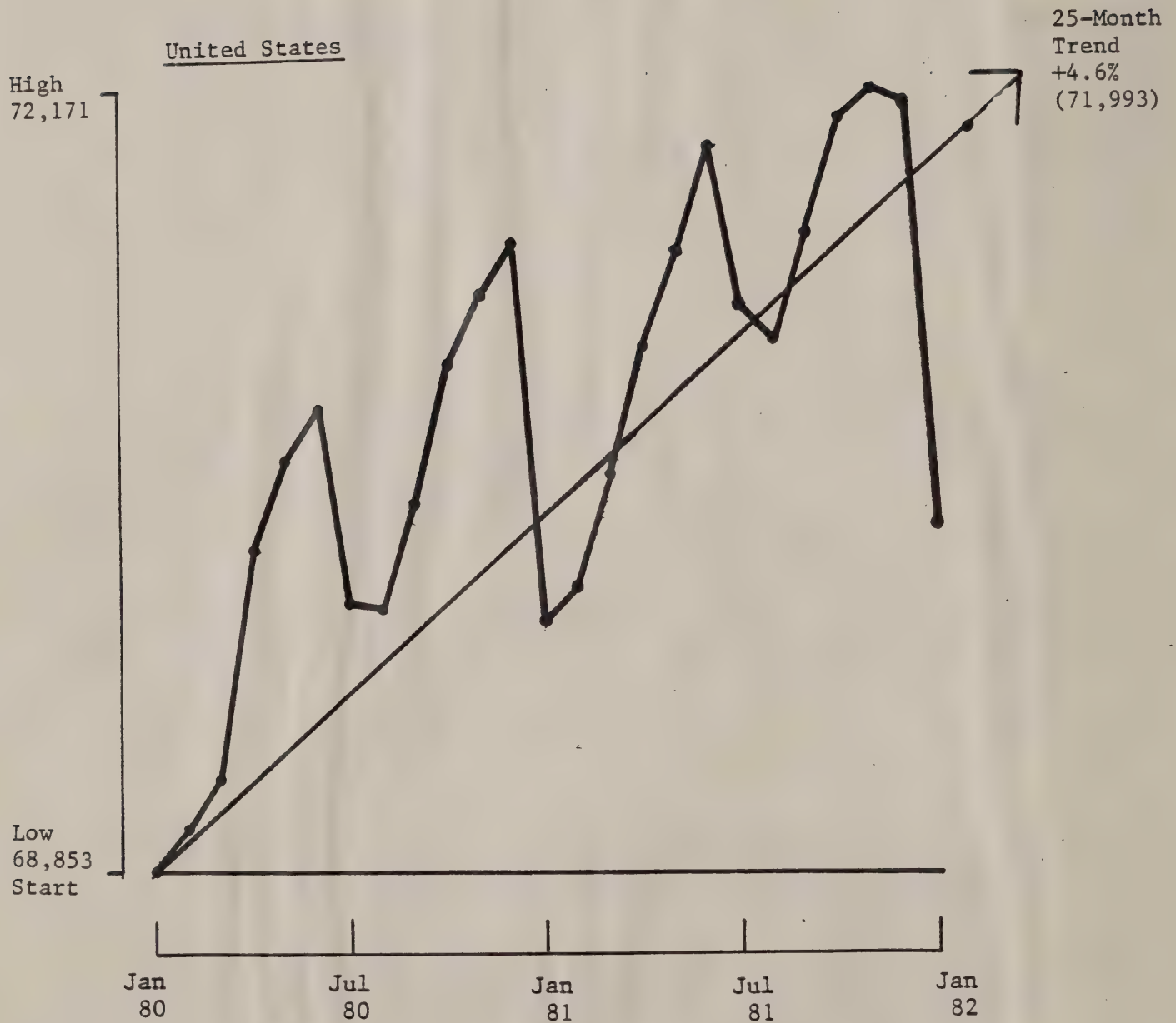
| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|-----------------------------------|---------------|-------------|-------|-------------|
| RECESSION 1980: JAN80 - JUL80 * | 1.7% | 3.5% | 3.1% | 1.1% |
| RECOVERY 1980-1981: JUL80 - JUL81 | 1.8% | 0.8% | 0.5% | 1.6% |
| RECESSION 1981: JUL81 - JAN82 * | -1.3% | -1.9% | -1.8% | - .8% |

SOURCE: B.R.A. RESEARCH DEPARTMENT
FROM 790 NON-AGRICULTURAL EMPLOYMENT SERIES
SEE TABLE 7

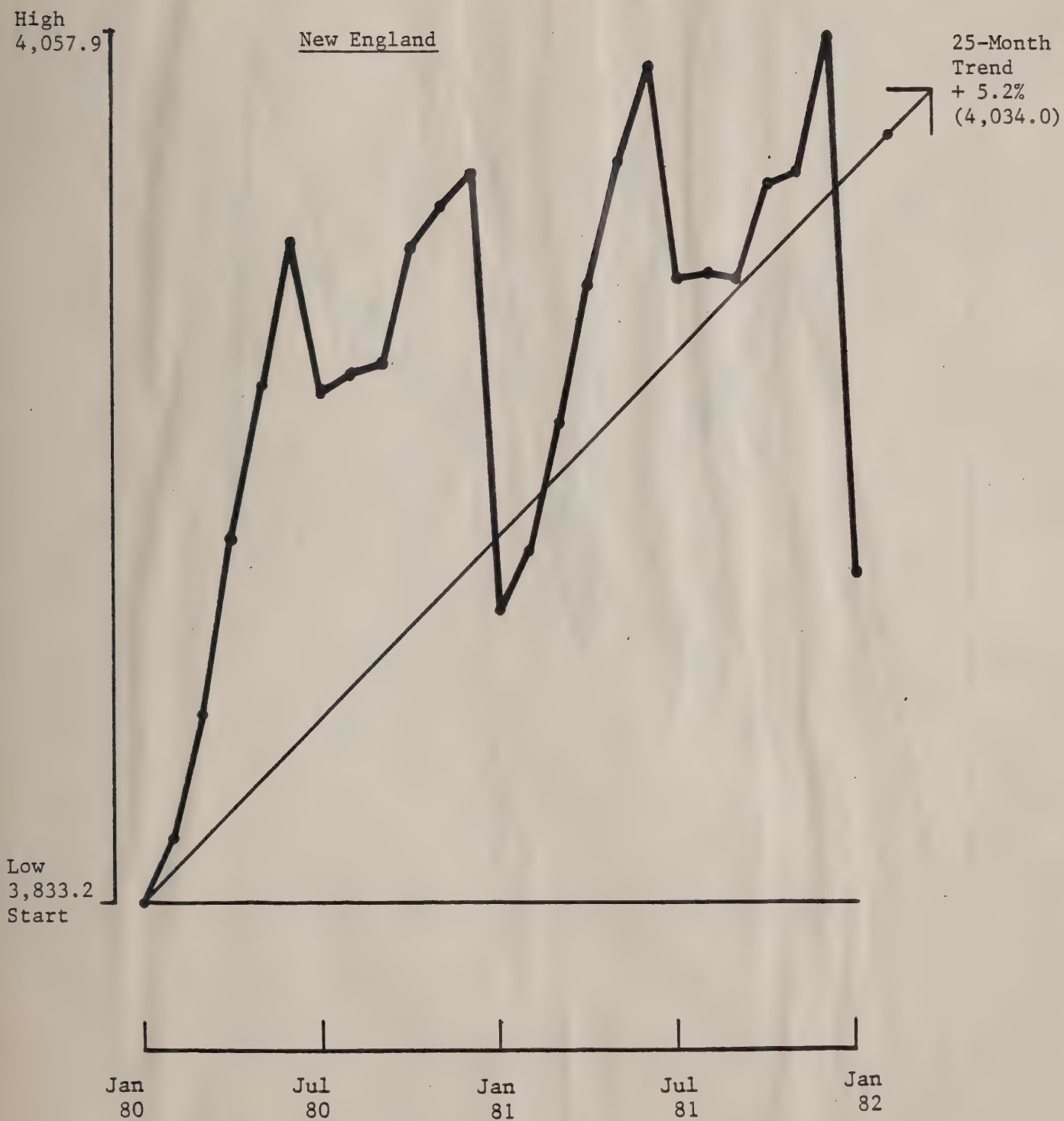
NOTE: FOR PURPOSES OF CONSISTENCY JANUARY AND JULY ARE USED
BECAUSE THEY BOTH REPRESENT PERIODS OF EMPLOYMENT TROUGHS
IN SEASONALLY UNADJUSTED EMPLOYMENT SERIES.

* NOTE: THE 1980 RECESSION MAY BE SLIGHTLY UNDERSTATED AND THE 1981 RECESSION SLIGHTLY OVERSTATED BECAUSE SEASONAL VARIATION IN VARIOUS INDUSTRIES (CONSTRUCTION, MANUFACTURING, TRADE, AND SERVICES) RESULTS IN HIGHER EMPLOYMENT TOTALS IN JULY THAN IN JANUARY EVEN DURING REGULAR ECONOMIC TIMES.

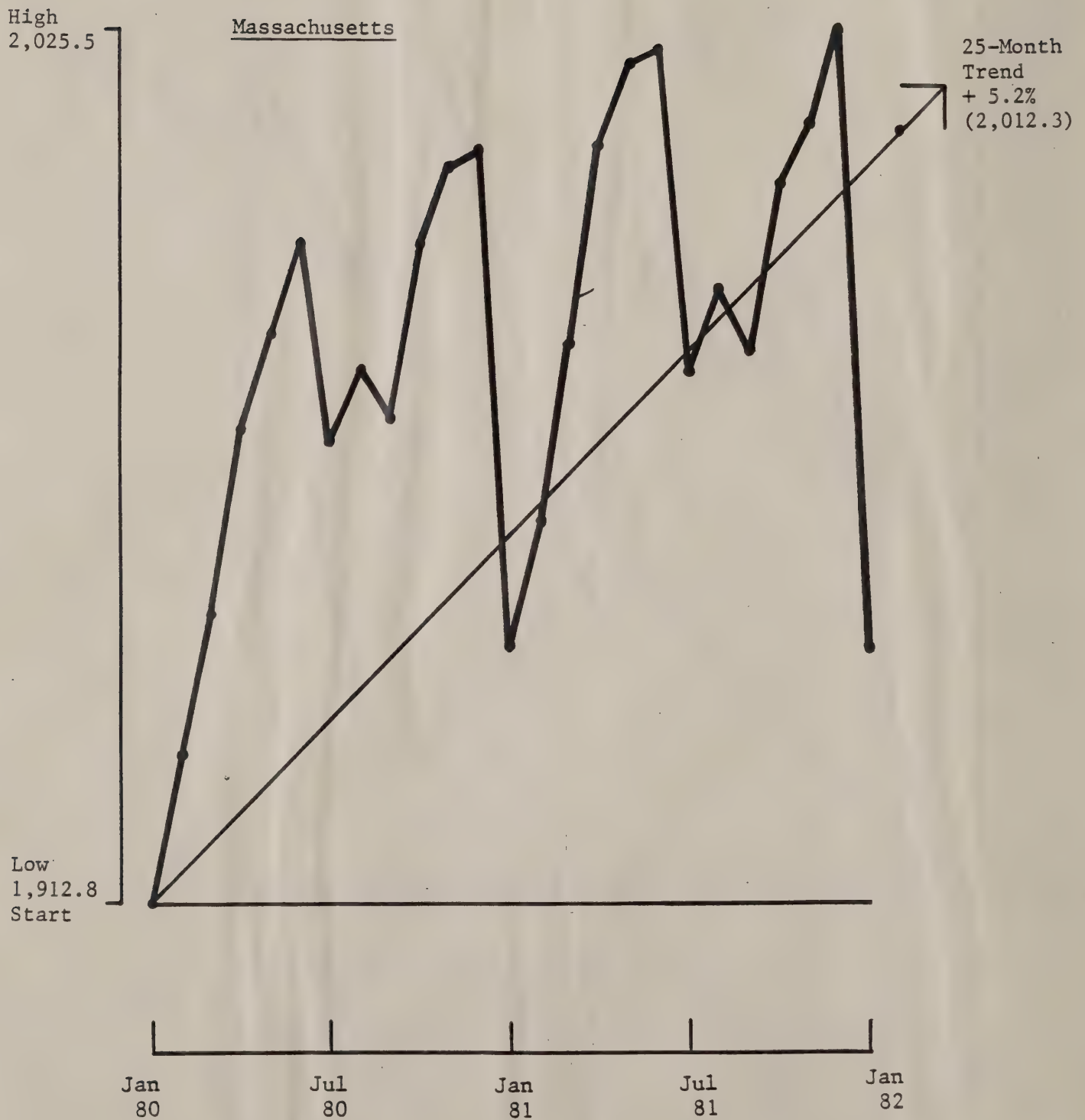
MONTHLY TREND IN NON-MANUFACTURING EMPLOYMENT
1980-1981



MONTHLY TRENDS IN NON-MANUFACTURING EMPLOYMENT
1980-1981



MONTHLY TREND IN NON-MANUFACTURING EMPLOYMENT
1980-1981



MONTHLY TREND IN NON-MANUFACTURING EMPLOYMENT
1980-1981

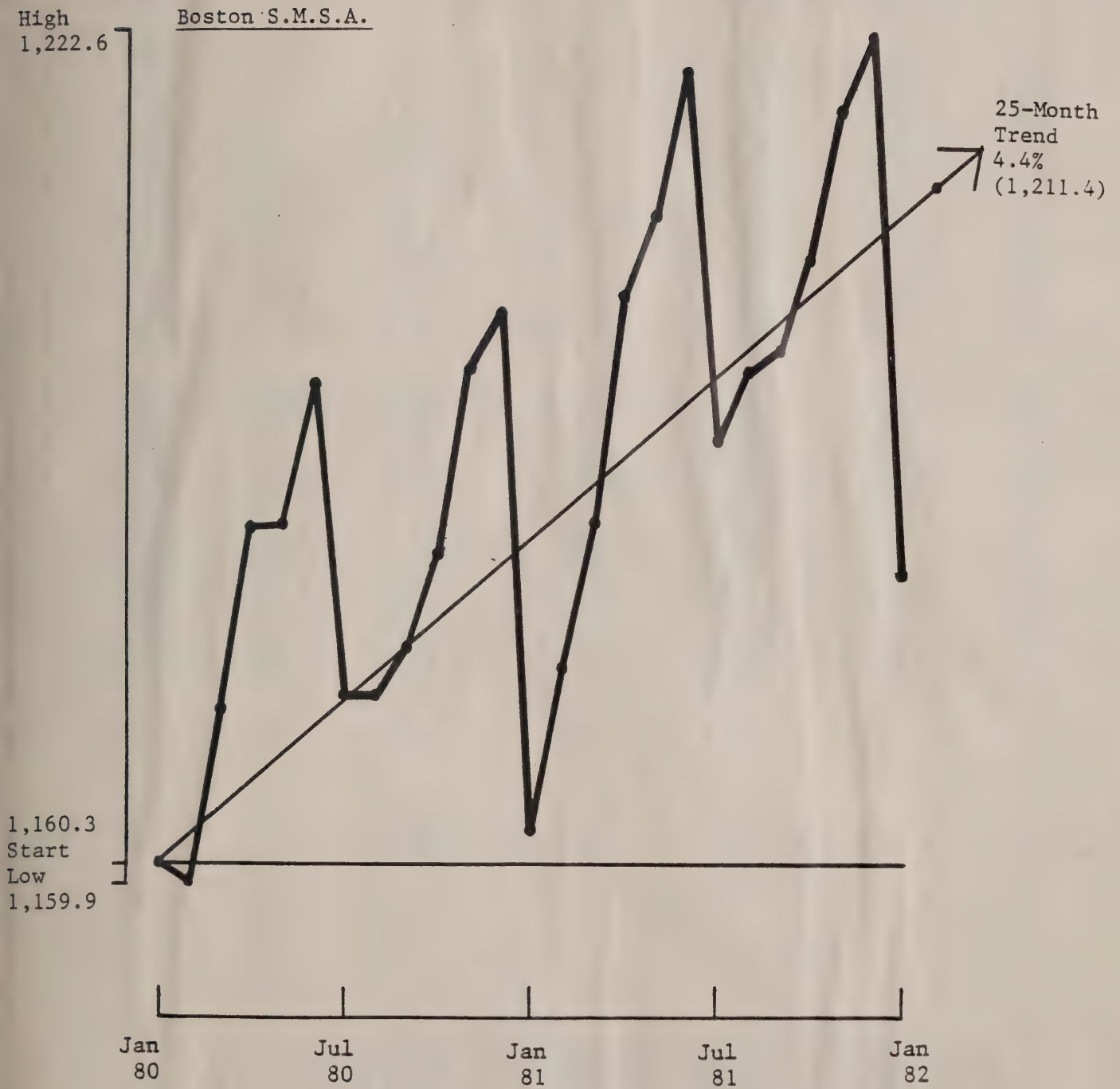


TABLE 9
CONSTRUCTION EMPLOYMENT

MONTHLY: JANUARY 1980 - JANUARY 1982
(NOT SEASONALLY ADJUSTED)
(EMPLOYMENT IN THOUSANDS)

| YEAR& MONTH | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA | %N.E./ U.S. | %MASS/ U.S. | %SMSA/ U.S. |
|----------------|------------------|----------------|-------|----------------|----------------|----------------|----------------|
| 1980 JAN. | 4,194 | 170.4 | 68.6 | 37.8 | 4.06 | 1.64 | 0.90 |
| FEB. | 4,109 | 160.8 | 65.4 | 36.4 | 3.91 | 1.59 | 0.89 |
| MAR. | 4,150 | 161.7 | 66.7 | 37.4 | 3.90 | 1.61 | 0.90 |
| APR. | 4,311 | 173.8 | 71.3 | 39.7 | 4.03 | 1.65 | 0.92 |
| MAY. | 4,471 | 182.3 | 73.8 | 40.7 | 4.08 | 1.65 | 0.91 |
| JUN. | 4,545 | 191.3 | 76.2 | 41.9 | 4.21 | 1.68 | 0.92 |
| JUL. | 4,562 | 192.5 | 74.8 | 41.1 | 4.22 | 1.64 | 0.90 |
| AUG. | 4,637 | 195.6 | 78.5 | 41.7 | 4.22 | 1.69 | 0.90 |
| SEP. | 4,613 | 192.3 | 76.9 | 41.2 | 4.17 | 1.67 | 0.89 |
| OCT. | 4,619 | 191.8 | 76.7 | 41.7 | 4.15 | 1.66 | 0.90 |
| NOV. | 4,533 | 190.6 | 76.8 | 41.2 | 4.20 | 1.69 | 0.91 |
| DEC. | 4,343 | 181.7 | 72.2 | 39.9 | 4.18 | 1.66 | 0.92 |
| 1981 JAN. | 3,995 | 159.7 | 64.6 | 36.6 | 4.00 | 1.62 | 0.92 |
| FEB. | 3,901 | 153.8 | 61.6 | 35.2 | 3.94 | 1.58 | 0.90 |
| MAR. | 4,048 | 156.5 | 63.5 | 36.6 | 3.87 | 1.57 | 0.90 |
| APR. | 4,246 | 167.9 | 69.3 | 39.4 | 3.95 | 1.63 | 0.93 |
| MAY. | 4,356 | 178.0 | 70.8 | 42.1 | 4.09 | 1.63 | 0.97 |
| JUN. | 4,477 | 186.8 | 71.9 | 44.1 | 4.17 | 1.61 | 0.99 |
| JUL. | 4,554 | 186.8 | 68.2 | 41.9 | 4.10 | 1.50 | 0.92 |
| AUG. | 4,579 | 191.7 | 73.3 | 45.4 | 4.19 | 1.60 | 0.99 |
| SEP. | 4,516 | 189.7 | 72.4 | 45.0 | 4.20 | 1.60 | 1.00 |
| OCT. | 4,493 | 188.7 | 72.4 | 44.7 | 4.20 | 1.61 | 0.99 |
| NOV. | 4,369 | 187.2 | 72.5 | 44.5 | 4.28 | 1.66 | 1.02 |
| DEC. | 4,155 | 181.9 | 70.5 | 43.0 | 4.38 | 1.70 | 1.03 |
| 1982 JAN. | 3,706 | 157.9 | 63.2 | 38.6 | 4.26 | 1.71 | 1.04 |
| 1980 AVG. | 4,424 | 182.1 | 73.2 | 40.1 | 4.12 | 1.65 | 0.91 |
| 1981 AVG. | 4,307 | 177.4 | 69.2 | 41.5 | 4.12 | 1.61 | 0.96 |

SOURCE: 790 SERIES OF NON-AGRICULTURAL EMPLOYMENT.
U.S. BUREAU OF LABOR STATISTICS, MASSACHUSETTS DIVISION OF
EMPLOYMENT SECURITY, 1980-1982. COMPILED BY B.R.A. RESEARCH
DEPARTMENT, MARCH 1982.

NOTE: 1980 MONTHLY EMPLOYMENT REVISED BENCHMARK SERIES FOR ALL AREAS.
1981 EMPLOYMENT UNREVISED UNTIL BENCHMARKED FOR ALL AREAS.
1982 EMPLOYMENT PRELIMINARY AND UNREVISED.

TABLE 10
CONSTRUCTION EMPLOYMENT

PERCENT CHANGE: 1980 - 1982
U.S., NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

A. PERCENT CHANGE FROM JANUARY 1980

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|--------------------------------|---------------|-------------|--------|-------------|
| SIX MONTHS: JAN80 - JUL80 | 8.8% | 13.0% | 9.0% | 8.7% |
| EIGHTEEN MONTHS: JAN80 - JUL81 | 8.6% | 9.6% | - 0.6% | 10.8% |
| TWO YEARS: JAN80 - JUL82 | -11.6% | - 7.3% | - 7.9% | 2.1% |

B. PERCENT CHANGE DURING THREE INTERVALS, 1980 - 1981

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|-----------------------------------|---------------|-------------|--------|-------------|
| RECESSION 1980: JAN80 - JUL80 * | 8.8% | 13.0% | 9.0% | 8.7% |
| RECOVERY 1980-1981: JUL80 - JUL81 | - 0.2% | - 3.0% | - 8.8% | 1.9% |
| RECESSION 1981: JUL81 - JAN82 * | -18.6% | -15.5% | - 7.3% | - 7.9% |

SOURCE: B.R.A. RESEARCH DEPARTMENT
FROM 790 NON-AGRICULTURAL EMPLOYMENT SERIES
SEE TABLE 9

NOTE: FOR PURPOSES OF CONSISTENCY JANUARY AND JULY ARE USED
BECAUSE THEY BOTH REPRESENT PERIODS OF EMPLOYMENT TROUGHS
IN SEASONALLY UNADJUSTED EMPLOYMENT SERIES.

* NOTE: THE 1980 RECESSION MAY BE SLIGHTLY UNDERSTATED AND THE 1981 RECESSION SLIGHTLY OVERSTATED BECAUSE SEASONAL VARIATION IN VARIOUS INDUSTRIES (CONSTRUCTION, MANUFACTURING, TRADE, AND SERVICES) RESULTS IN HIGHER EMPLOYMENT TOTALS IN JULY THAN IN JANUARY EVEN DURING REGULAR ECONOMIC TIMES.

TABLE 11
WHOLESALE AND RETAIL TRADE EMPLOYMENT

MONTHLY: JANUARY 1980 - JANUARY 1982
(NOT SEASONALLY ADJUSTED)
(EMPLOYMENT IN THOUSANDS)

| YEAR& MONTH | UNITED STATES | NEW ENGLAND | MASS. . | BOSTON SMSA | %N.E./ U.S. | %MASS/ U.S. | %SMSA/ U.S. |
|----------------|------------------|----------------|------------|----------------|----------------|----------------|----------------|
| 1980 JAN. | 20,325 | 1,137.4 | 559.4 | 317.7 | 5.60 | 2.75 | 1.56 |
| FEB. | 20,155 | 1,124.4 | 553.1 | 313.1 | 5.58 | 2.74 | 1.55 |
| MAR. | 20,226 | 1,134.8 | 558.4 | 315.9 | 5.61 | 2.76 | 1.56 |
| APR. | 20,373 | 1,154.8 | 568.6 | 320.4 | 5.67 | 2.79 | 1.57 |
| MAY. | 20,497 | 1,172.5 | 577.5 | 322.3 | 5.72 | 2.82 | 1.57 |
| JUN. | 20,347 | 1,188.2 | 583.0 | 325.4 | 5.84 | 2.87 | 1.60 |
| JUL. | 20,300 | 1,180.4 | 577.0 | 312.7 | 5.81 | 2.84 | 1.54 |
| AUG. | 20,373 | 1,176.1 | 572.6 | 311.4 | 5.77 | 2.81 | 1.53 |
| SEP. | 20,495 | 1,177.9 | 572.7 | 318.6 | 5.75 | 2.79 | 1.55 |
| OCT. | 20,533 | 1,173.4 | 571.3 | 317.9 | 5.71 | 2.78 | 1.55 |
| NOV. | 20,761 | 1,181.6 | 575.9 | 323.4 | 5.69 | 2.77 | 1.56 |
| DEC. | 21,138 | 1,201.7 | 586.6 | 329.0 | 5.69 | 2.78 | 1.56 |
| 1981 JAN. | 20,366 | 1,155.7 | 566.9 | 317.2 | 5.67 | 2.78 | 1.56 |
| FEB. | 20,196 | 1,142.8 | 560.1 | 312.7 | 5.66 | 2.77 | 1.55 |
| MAR. | 20,290 | 1,149.3 | 564.3 | 315.4 | 5.66 | 2.78 | 1.55 |
| APR. | 20,513 | 1,166.0 | 576.2 | 319.8 | 5.68 | 2.81 | 1.56 |
| MAY. | 20,672 | 1,180.4 | 583.4 | 321.9 | 5.71 | 2.82 | 1.56 |
| JUN. | 20,795 | 1,197.6 | 590.8 | 324.9 | 5.76 | 2.84 | 1.56 |
| JUL. | 20,735 | 1,187.4 | 583.0 | 312.5 | 5.73 | 2.81 | 1.51 |
| AUG. | 20,811 | 1,188.8 | 585.6 | 312.7 | 5.71 | 2.81 | 1.50 |
| SEP. | 20,919 | 1,193.3 | 590.0 | 319.9 | 5.70 | 2.82 | 1.53 |
| OCT. | 20,999 | 1,188.2 | 588.4 | 319.7 | 5.66 | 2.80 | 1.52 |
| NOV. | 21,148 | 1,194.5 | 593.6 | 325.9 | 5.65 | 2.81 | 1.54 |
| DEC. | 21,413 | 1,222.1 | 601.6 | 332.6 | 5.71 | 2.81 | 1.55 |
| 1982 JAN. | 20,676 | 1,164.3 | 570.4 | 321.0 | 5.63 | 2.76 | 1.55 |
| 1980 AVG. | 20,460 | 1,166.9 | 571.3 | 319.0 | 5.70 | 2.79 | 1.56 |
| 1981 AVG. | 20,738 | 1,180.5 | 582.0 | 319.6 | 5.69 | 2.81 | 1.54 |

SOURCE: 790 SERIES OF NON-AGRICULTURAL EMPLOYMENT.

U.S. BUREAU OF LABOR STATISTICS, MASSACHUSETTS DIVISION OF
EMPLOYMENT SECURITY, 1980-1982. COMPILED BY B.R.A. RESEARCH
DEPARTMENT, MARCH 1982.

NOTE: 1980 MONTHLY EMPLOYMENT REVISED BENCHMARK SERIES FOR ALL AREAS.
1981 EMPLOYMENT UNREVISED UNTIL BENCHMARKED FOR ALL AREAS.
1982 EMPLOYMENT PRELIMINARY AND UNREVISED.

TABLE 12
WHOLESALE AND RETAIL TRADE EMPLOYMENT

PERCENT CHANGE: 1980 - 1982
U.S., NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

A. PERCENT CHANGE FROM JANUARY 1980

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|--------------------------------|------------------|----------------|-------|----------------|
| SIX MONTHS: JAN80 - JUL80 | - 0.1% | 3.8% | 3.1% | - 1.6% |
| EIGHTEEN MONTHS: JAN80 - JUL81 | 2.0% | 4.4% | 4.2% | - 1.6% |
| TWO YEARS: JAN80 - JUL82 | 1.7% | 2.4% | 2.0% | 1.0% |

B. PERCENT CHANGE DURING THREE INTERVALS, 1980 - 1981

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|-----------------------------------|------------------|----------------|--------|----------------|
| RECESSION 1980: JAN80 - JUL80 * | - 0.1% | 3.8% | 3.1% | - 1.6% |
| RECOVERY 1980-1981: JUL80 - JUL81 | 2.1% | 0.6% | 1.0% | - 0.1% |
| RECESSION 1981: JUL81 - JAN82 * | - 0.3% | - 1.9% | - 2.2% | 2.7% |

SOURCE: B.R.A. RESEARCH DEPARTMENT
FROM 790 NON-AGRICULTURAL EMPLOYMENT SERIES
SEE TABLE 11

NOTE: FOR PURPOSES OF CONSISTENCY JANUARY AND JULY ARE USED
BECAUSE THEY BOTH REPRESENT PERIODS OF EMPLOYMENT TROUGHS
IN SEASONALLY UNADJUSTED EMPLOYMENT SERIES.

* NOTE: THE 1980 RECESSION MAY BE SLIGHTLY UNDERSTATED AND THE 1981
RECESSION SLIGHTLY OVERSTATED BECAUSE SEASONAL VARIATION IN
VARIOUS INDUSTRIES (CONSTRUCTION, MANUFACTURING, TRADE, AND
SERVICES) RESULTS IN HIGHER EMPLOYMENT TOTALS IN JULY THAN
IN JANUARY EVEN DURING REGULAR ECONOMIC TIMES.

TABLE 13
SERVICES EMPLOYMENT

MONTHLY: JANUARY 1980 - JANUARY 1982
(NOT SEASONALLY ADJUSTED)
(EMPLOYMENT IN THOUSANDS)

| YEAR& MONTH | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA | %N.E./ U.S. | %MASS/ U.S. | %SMSA U.S. |
|----------------|------------------|----------------|-------|----------------|----------------|----------------|---------------|
| 1980 JAN. | 17,135 | 1,143.0 | 600.8 | 398.9 | 6.67 | 3.51 | 2.33 |
| FEB. | 17,317 | 1,165.7 | 620.0 | 413.3 | 6.73 | 3.58 | 2.39 |
| MAR. | 17,478 | 1,179.5 | 628.1 | 419.8 | 6.75 | 3.59 | 2.40 |
| APR. | 17,636 | 1,196.6 | 640.7 | 429.0 | 6.78 | 3.63 | 2.43 |
| MAY. | 17,747 | 1,206.2 | 641.7 | 427.7 | 6.80 | 3.62 | 2.41 |
| JUN. | 18,013 | 1,213.0 | 640.5 | 429.4 | 6.73 | 3.56 | 2.38 |
| JUL. | 18,145 | 1,224.6 | 639.4 | 419.5 | 6.75 | 3.52 | 2.31 |
| AUG. | 18,136 | 1,231.0 | 645.2 | 423.8 | 6.79 | 3.56 | 2.34 |
| SEP. | 18,087 | 1,220.2 | 640.0 | 429.8 | 6.75 | 3.54 | 2.38 |
| OCT. | 18,115 | 1,230.5 | 653.3 | 433.4 | 6.79 | 3.61 | 2.39 |
| NOV. | 18,118 | 1,230.0 | 658.4 | 437.7 | 6.79 | 3.63 | 2.42 |
| DEC. | 18,149 | 1,227.7 | 654.7 | 437.2 | 6.76 | 3.61 | 2.41 |
| 1981 JAN. | 17,972 | 1,202.7 | 632.0 | 416.8 | 6.69 | 3.52 | 2.32 |
| FEB. | 18,126 | 1,224.7 | 650.7 | 431.8 | 6.76 | 3.59 | 2.38 |
| MAR. | 18,287 | 1,241.5 | 663.2 | 438.5 | 6.79 | 3.63 | 2.40 |
| APR. | 18,512 | 1,255.5 | 675.7 | 449.9 | 6.78 | 3.65 | 2.43 |
| MAY. | 18,633 | 1,263.7 | 676.0 | 451.0 | 6.78 | 3.63 | 2.42 |
| JUN. | 18,764 | 1,261.4 | 668.2 | 455.4 | 6.72 | 3.56 | 2.43 |
| JUL. | 18,847 | 1,269.4 | 664.6 | 449.6 | 6.74 | 3.53 | 2.39 |
| AUG. | 18,835 | 1,271.9 | 669.7 | 452.7 | 6.75 | 3.56 | 2.40 |
| SEP. | 18,812 | 1,262.4 | 667.3 | 454.3 | 6.71 | 3.55 | 2.41 |
| OCT. | 18,826 | 1,274.6 | 680.4 | 457.2 | 6.77 | 3.61 | 2.43 |
| NOV. | 18,800 | 1,269.1 | 680.8 | 461.3 | 6.75 | 3.62 | 2.45 |
| DEC. | 18,762 | 1,265.3 | 682.7 | 461.1 | 6.74 | 3.64 | 2.46 |
| 1982 JAN. | 18,510 | 1,235.3 | 658.8 | 440.7 | 6.67 | 3.56 | 2.38 |
| 1980 AVG. | 17,840 | 1,205.7 | 638.6 | 425.0 | 6.76 | 3.58 | 2.38 |
| 1981 AVG. | 18,598 | 1,255.2 | 667.6 | 448.3 | 6.75 | 3.59 | 2.41 |

SOURCE: 790 SERIES OF NON-AGRICULTURAL EMPLOYMENT.

U.S. BUREAU OF LABOR STATISTICS, MASSACHUSETTS DIVISION OF
EMPLOYMENT SECURITY, 1980-1982. COMPILED BY B.R.A. RESEARCH
DEPARTMENT, MARCH 1982.

NOTE: 1980 MONTHLY EMPLOYMENT REVISED BENCHMARK SERIES FOR ALL AREAS.
1981 EMPLOYMENT UNREVISED UNTIL BENCHMARKED FOR ALL AREAS.
1982 EMPLOYMENT PRELIMINARY AND UNREVISED.

TABLE 14
SERVICES EMPLOYMENT

PERCENT CHANGE: 1980 - 1982
U.S., NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

A. PERCENT CHANGE FROM JANUARY 1980

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|--------------------------------|---------------|-------------|-------|-------------|
| SIX MONTHS: JAN80 - JUL80 | 5.9% | 7.1% | 6.4% | 5.2% |
| EIGHTEEN MONTHS: JAN80 - JUL81 | 10.0% | 11.1% | 10.6% | 12.7% |
| TWO YEARS: JAN80 - JUL82 | 8.0% | 8.1% | 9.7% | 10.5% |

B. PERCENT CHANGE DURING THREE INTERVALS, 1980 - 1981

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS. | BOSTON SMSA |
|-----------------------------------|---------------|-------------|--------|-------------|
| RECESSION 1980: JAN80 - JUL80 * | 5.9% | 7.1% | 6.4% | 5.2% |
| RECOVERY 1980-1981: JUL80 - JUL81 | 3.9% | 3.7% | 3.9% | 7.2% |
| RECESSION 1981: JUL81 - JAN82 * | - 1.8% | - 2.7% | - 0.9% | - 2.0% |

SOURCE: B.R.A. RESEARCH DEPARTMENT
FROM 790 NON-AGRICULTURAL EMPLOYMENT SERIES
SEE TABLE 13

NOTE: FOR PURPOSES OF CONSISTENCY JANUARY AND JULY ARE USED
BECAUSE THEY BOTH REPRESENT PERIODS OF EMPLOYMENT TROUGHS
IN SEASONALLY UNADJUSTED EMPLOYMENT SERIES.

* NOTE: THE 1980 RECESSION MAY BE SLIGHTLY UNDERSTATED AND THE 1981
RECESSION SLIGHTLY OVERSTATED BECAUSE SEASONAL VARIATION IN
VARIOUS INDUSTRIES (CONSTRUCTION, MANUFACTURING, TRADE, AND
SERVICES) RESULTS IN HIGHER EMPLOYMENT TOTALS IN JULY THAN
IN JANUARY EVEN DURING REGULAR ECONOMIC TIMES.

TABLE 15
GOVERNMENT EMPLOYMENT

MONTHLY: JANUARY 1980 - JANUARY 1982
(NOT SEASONALLY ADJUSTED)
(EMPLOYMENT IN THOUSANDS)

| YEAR& MONTH | UNITED STATES | NEW ENGLAND | MASS. U.S. | BOSTON SMSA | %N.E./ U.S. | %MASS/ U.S. | %SMSA/ U.S. |
|----------------|------------------|----------------|---------------|----------------|----------------|----------------|----------------|
| 1980 JAN. | 16,029 | 826.6 | 408.7 | 215.9 | 5.16 | 2.55 | 1.35 |
| FEB. | 16,292 | 842.7 | 417.1 | 216.7 | 5.17 | 2.56 | 1.33 |
| MAR. | 16,445 | 847.6 | 418.6 | 217.6 | 5.15 | 2.55 | 1.32 |
| APR. | 16,651 | 841.4 | 414.8 | 215.0 | 5.05 | 2.49 | 1.29 |
| MAY. | 16,556 | 841.9 | 411.9 | 213.2 | 5.09 | 2.49 | 1.29 |
| JUN. | 16,477 | 836.3 | 411.8 | 214.9 | 5.08 | 2.50 | 1.30 |
| JUL. | 15,611 | 797.3 | 397.3 | 217.8 | 5.11 | 2.55 | 1.40 |
| AUG. | 15,430 | 796.6 | 401.8 | 213.5 | 5.16 | 2.60 | 1.38 |
| SEP. | 15,841 | 810.1 | 400.8 | 203.2 | 5.11 | 2.53 | 1.28 |
| OCT. | 16,331 | 837.7 | 414.6 | 208.0 | 5.13 | 2.54 | 1.27 |
| NOV. | 16,473 | 841.5 | 414.5 | 212.2 | 5.11 | 2.52 | 1.29 |
| DEC. | 16,435 | 840.0 | 412.6 | 211.7 | 5.11 | 2.51 | 1.29 |
| 1981 JAN. | 16,216 | 820.1 | 398.8 | 207.1 | 5.06 | 2.46 | 1.28 |
| FEB. | 16,458 | 832.4 | 405.9 | 209.8 | 5.06 | 2.47 | 1.27 |
| MAR. | 16,493 | 836.3 | 408.2 | 208.9 | 5.07 | 2.47 | 1.27 |
| APR. | 16,457 | 829.3 | 403.1 | 207.4 | 5.04 | 2.45 | 1.26 |
| MAY. | 16,414 | 824.3 | 402.0 | 206.8 | 5.02 | 2.45 | 1.26 |
| JUN. | 16,203 | 816.0 | 397.8 | 205.9 | 5.04 | 2.46 | 1.27 |
| JUL. | 15,387 | 769.4 | 374.4 | 200.9 | 5.00 | 2.43 | 1.31 |
| AUG. | 15,148 | 760.5 | 370.5 | 198.6 | 5.02 | 2.45 | 1.31 |
| SEP. | 15,560 | 763.9 | 360.9 | 190.8 | 4.91 | 2.32 | 1.23 |
| OCT. | 16,021 | 787.6 | 374.9 | 196.2 | 4.92 | 2.34 | 1.22 |
| NOV. | 16,157 | 790.7 | 375.9 | 197.2 | 4.89 | 2.33 | 1.22 |
| DEC. | 16,129 | 800.3 | 379.2 | 196.9 | 4.96 | 2.35 | 1.22 |
| 1982 JAN. | 15,890 | 777.6 | 364.3 | 192.8 | 4.89 | 2.29 | 1.21 |
| 1980 AVG. | 16,214 | 830.0 | 410.4 | 213.3 | 5.12 | 2.53 | 1.32 |
| 1981 AVG. | 16,054 | 802.6 | 387.6 | 202.2 | 5.00 | 2.41 | 1.26 |

SOURCE: 790 SERIES OF NON-AGRICULTURAL EMPLOYMENT.
U.S. BUREAU OF LABOR STATISTICS, MASSACHUSETTS DIVISION OF
EMPLOYMENT SECURITY, 1980-1982. COMPILED BY B.R.A. RESEARCH
DEPARTMENT, MARCH 1982.

NOTE: 1980 MONTHLY EMPLOYMENT REVISED BENCHMARK SERIES FOR ALL AREAS.
1981 EMPLOYMENT UNREVISED UNTIL BENCHMARKED FOR ALL AREAS.
1982 EMPLOYMENT PRELIMINARY AND UNREVISED.

TABLE 16
GOVERNMENT EMPLOYMENT

PERCENT CHANGE: 1980 - 1982
U.S., NEW ENGLAND, MASSACHUSETTS, AND BOSTON SMSA

A. PERCENT CHANGE FROM JANUARY 1980

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS: | BOSTON SMSA |
|--------------------------------|---------------|-------------|--------|-------------|
| SIX MONTHS: JAN80 - JUL80 | - 2.6% | - 3.5% | - 2.8% | 0.9% |
| EIGHTEEN MONTHS: JAN80 - JUL81 | - 4.0% | - 6.9% | - 8.4% | - 6.9% |
| TWO YEARS: JAN80 - JUL82 | - 0.9% | - 5.9% | -10.9% | -10.7% |

B. PERCENT CHANGE DURING THREE INTERVALS, 1980 - 1981

| TIME PERIOD | UNITED STATES | NEW ENGLAND | MASS: | BOSTON SMSA |
|-----------------------------------|---------------|-------------|--------|-------------|
| RECESSION 1980: JAN80 - JUL80 * | - 2.6% | - 3.5% | - 2.8% | 0.9% |
| RECOVERY 1980-1981: JUL80 - JUL81 | - 1.4% | - 3.5% | - 5.8% | - 7.8% |
| RECESSION 1981: JUL81 - JAN82 * | 3.3% | 1.1% | - 2.7% | - 4.0% |

SOURCE: B.R.A. RESEARCH DEPARTMENT
FROM 790 NON-AGRICULTURAL EMPLOYMENT SERIES
SEE TABLE 15

NOTE: FOR PURPOSES OF CONSISTENCY JANUARY AND JULY ARE USED
BECAUSE THEY BOTH REPRESENT PERIODS OF EMPLOYMENT TROUGHS
IN SEASONALLY UNADJUSTED EMPLOYMENT SERIES.

* NOTE: THE 1980 RECESSION MAY BE SLIGHTLY UNDERSTATED AND THE 1981 RECESSION SLIGHTLY OVERSTATED BECAUSE SEASONAL VARIATION IN VARIOUS INDUSTRIES (CONSTRUCTION, MANUFACTURING, TRADE, AND SERVICES) RESULTS IN HIGHER EMPLOYMENT TOTALS IN JULY THAN IN JANUARY EVEN DURING REGULAR ECONOMIC TIMES.

V. CONCLUSION: A Glance at 1982 and Beyond

The New England economy and component areas of Massachusetts, the Metro Area and Boston have performed well enough through early 1982 to avoid any substantial setback. Metropolitan Boston has held up remarkably well, better than the New England and Massachusetts economies, buoyed by less severe manufacturing losses, a growing commercial construction industry and strong services performance.

In a long-range view of the New England economy over the next ten years, the prospects for growth similar to the 1976-1980 experience seem brighter than at any time during the past. New England has been aptly portrayed as a resurgent economy with expanding opportunities for job and income growth set on the foundation of a newer industrial structure. A broader range of stable and growing industries provides a stronger regional economic base than that of the past fifty years. While New England may not become a fast-growth region, it is developing a more stable economy--less subject to large losses during bad times and more susceptible to gains during good economic times.

Economists have recently noted that the New England region, having shed many of the vestiges of an older, industrial base (particularly textiles and shoe manufacturing), has been transformed into a resurgent economy in both employment and population terms¹. The newer industrial structure of high technology manufacturing, financial firms, and professional/business services was fostered by the availability of skilled labor and a heritage of institutional development and financial resources^{2,3}. A significant share of less competitive, faltering, and more recession-prone industry remains but this segment of the economy is becoming smaller. On the whole, the newer and modernized economic

structure of the region has made New England a more vibrant economic area.

Recent national studies of the employment and income effects of past recessions have noted that the dominance of services in the economy, which account for a steadily increasing share of total employment, has served to moderate employment and production losses during economic slumps and promote stability over the business cycle⁴. Of course, since some services are more sensitive to recessions than others, the industry mix is important. Services are not immune from cyclical downturns but the legal, health, business, hotel/motel, and recreation activities are less affected⁵. These are some of the areas of specialization which are expected to contribute to the greater economic stability of Massachusetts and the Boston Metro Area.

Economists report that because of the economic growth and structural transformation experienced, the New England Region and the State may be less vulnerable to recessionary losses at this time than was the case in earlier post-war national economic slumps^{6,7}. This prognosis has been generally borne out by recent economic events in the 1979-1981 period. The continued employment growth in Boston, during the current economic slowdown, supports the conclusion that, in terms of employment generation, the City's economy is in a strong position.

If the recession were to continue for some time, Boston would be affected. The City's minorities, women, and youth are more susceptible to job losses than the work-force as a whole. In the mid-1970s, Boston was hurt by recession. In the past two years, however, the Boston economy has been holding up better, during difficult times for the national economy. In summary, the question of a delayed, lingering

economic effect on the City during the recession is less likely due to the economic factors noted earlier^{9,10,11}.

To date, even the manufacturing and construction losses in the Region have not been harsh; definitely nowhere near the severity of 1974-76. The impact of manufacturing employment losses are not as important now because its relative share of the City economy is smaller and faster growing industries are more dominant. Thus, the susceptibility to recessionary impacts seems to be less.

Governmental employment cutbacks have been steadily intensifying across the region through 1981. This is a comparatively new event and the long-term impact is yet to be felt. In the past, New England Region government employment has grown during times of economic decline (countercyclical effect)¹². The ties of government to private sector activities could spread recessionary impacts to further reduce economic activity in the region during 1982.

During recessionary times most news is bad, with slowing employment growth and rising unemployment rates. Current trends, though, must be seen in the light of the longer term effects of improved economic conditions evident in metropolitan Boston. Employment loss and rising unemployment rates have not been as severe as (1) past recessionary experiences, and (2) that of other regions of the country. Boston's long-term economic problems may center more in needs for manpower training and education than in employment growth which has a bright horizon. At present, severe employment decline is not the problem it has been in previous times, although continued losses in some industries will surely come about through 1982.

As economic events unfold in 1982, the interesting and significant barometer will be how well the City of Boston and the metropolitan area continue to perform compared to the state, region, and national economies and past recessionary bouts. While the prognosis for 1982 is for continued slow employment growth, the long term outlook for the Boston economy during the decade of the 1980s is favorable, based on gains in the faster growing national industries, particularly the broad-based services group.

As this report was being completed, the Federal Reserve Bank of Boston just released a study of regional recessionary impacts through early 1982. The study showed similar employment trends as this report and revealed further declines in 1982, particularly in manufacturing, but continued to show that "New England's economic performance was no worse than that of the country as a whole."¹³

Footnotes

- 1 Regional Diversity, Growth in the United States, 1960-1990. Gregory Jackson et al, 1981, Joint Center for Urban Studies of MIT and Harvard University, Auburn House Publishing Company, Boston, Massachusetts.
- 2 "The Evolution of New England Industry," John S. Hekman and John S. Strong, New England Economic Review, p.35, March/April 1981, Research Department, Federal Reserve Bank of Boston.
- 3 "A Quality Labor Supply," Lynne E. Browne, New England Economic Review, p.19, July/August 1981, Research Department, Federal Reserve Bank of Boston.
- 4 "Have Employment Patterns in Recessions Changed?" Norman Bowers, Monthly Labor Review p.15-28, February, 1981.
- 5 "The Services Industry: Is It Recession Proof?" Michael Urquhart, Monthly Labor Review, p.12-18, October, 1981.
- 6 National Economic Survey, The New York Times/Section 12/Sunday, January 10, 1982. "Surviving the Recession," Leonard Silk, p.1. "Where the Job Growth Is: Boston Region," Dudley Clendinea, p.70.
- 7 "Regional Impact of Current Recession," Hearing Before the Subcommittee on Fiscal and Intergovernmental Policy of the Joint Economic Committee, Congress of the United States, 96th Congress, First Session, October 16, 1979. U.S.G.P.O. Washington 1980.
- 8 "Is Massachusetts Recession Proof?" Joint Center Report, Joint Center for Urban Studies of MIT and Harvard University. Number 27/February 1982, p.3-5.
- 9 Fred C. Doolittle, "Employment in Boston: Past, Present, and Future," Paper presented to the Boston Workshop Series, December 2, 1981.
- 10 Fred C. Doolittle, "Jobs and People in Boston," Paper presented to the Boston Workshop Series, January 20, 1982.
- 11 City of Boston, "Facts for the Job and Economic Development Task Force," The Boston Committee, March 31, 1982.
- 12 "Government Employment: An Era of Slow Growth," John J. Tucker, Monthly Labor Review, p.19, October, 1981.
- 13 "New England Update: Comparing the Region's Economic Performance in 1980 and 1981," Lynn E. Browne, New England Economic Indicators, p. A5, April 1982.

Appendix Table A

BOSTON EMPLOYMENT^{*}, JAN. 1980-MAR. 1981

(Not seasonally adjusted)

| <u>Months</u> | <u>Total</u> | <u>Manufacturing Durables</u> | <u>Manufacturing Non-Durables</u> | <u>Non- Manufacturing</u> |
|---------------|--------------|-----------------------------------|---------------------------------------|-------------------------------|
| 1980 | | | | |
| Jan | 495,643 | 19,442 | 32,928 | 443,273 |
| Feb | 497,344 | 19,363 | 33,043 | 444,938 |
| Mar | 501,194 | 19,427 | 33,253 | 448,514 |
| Apr | 503,298 | 19,459 | 33,192 | 450,647 |
| May | 504,524 | 19,407 | 33,223 | 451,894 |
| Jun | 507,378 | 19,466 | 33,536 | 454,376 |
| Jul | 504,165 | 19,112 | 31,906 | 453,157 |
| Aug | 504,727 | 18,837 | 31,984 | 453,906 |
| Sept | 505,406 | 18,877 | 32,401 | 454,128 |
| Oct | 510,313 | 18,864 | 32,351 | 459,098 |
| Nov | 513,260 | 18,829 | 32,396 | 462,035 |
| Dec | 518,616 | 18,657 | 32,470 | 467,489 |
| 1981 | | | | |
| Jan | 502,059 | 18,080 | 32,410 | 451,569 |
| Feb | 502,179 | 18,416 | 32,610 | 451,423 |
| Mar | 503,795 | 18,277 | 32,270 | 453,288 |
| Apr | 505,761 | 18,362 | 32,316 | 455,083 |
| May | 507,791 | 18,265 | 32,495 | 457,031 |
| Jun | 508,837 | 18,329 | 33,315 | 457,193 |

BOSTON - U.S. EMPLOYMENT, JAN. 1980-MAR. 1981

| | | | | |
|------|--------|--------|--------|--------|
| 1980 | | | | |
| Jan | .00553 | .00154 | .00403 | .00644 |
| Feb | .00554 | .00154 | .00406 | .00643 |
| Mar | .00556 | .00154 | .00408 | .00645 |
| Apr | .00555 | .00157 | .00409 | .00642 |
| May | .00555 | .00160 | .00410 | .00640 |
| Jun | .00558 | .00162 | .00414 | .00642 |
| Jul | .00562 | .00163 | .00401 | .00647 |
| Aug | .00561 | .00160 | .00390 | .00649 |
| Sept | .00558 | .00157 | .00394 | .00645 |
| Oct | .00559 | .00156 | .00396 | .00647 |
| Nov | .00560 | .00155 | .00400 | .00648 |
| Dec | .00565 | .00154 | .00400 | .00654 |
| 1981 | | | | |
| Jan | .00558 | .00150 | .00400 | .00646 |
| Feb | .00557 | .00151 | .00401 | .00644 |
| Mar | .00555 | .00151 | .00400 | .00642 |
| Apr | .00554 | .00151 | .00401 | .00640 |
| May | .00553 | .00150 | .00400 | .00639 |
| Jun | .00550 | .00149 | .00406 | .00635 |

* Only workforce covered by Unemployment Insurance Program (about 90-92% of total full- and part-time jobs).

Source: Massachusetts Division of Employment Security, ES-202 Report.

Appendix Table B

BOSTON UNEMPLOYMENT INSURANCE-COVERED EMPLOYMENT JANUARY 1980 AND JUNE 1981

| | Employment January 1980 | Employment June 1981 | Change Jan 80-June 81 | Percent Change |
|--------------------|----------------------------|-------------------------|--------------------------|-------------------|
| Sub-Total, Private | 408,868 | 421,656 | + 2,328 | + .6% |
| Agri. & Mining | 523 | 551 | - 139 | - 20.1 |
| Construction | 8,790 | 9,852 | - 216 | - 2.1 |
| Manufacturing | 52,366 | 51,644 | - 1,358 | - 2.5 |
| Durables | 19,442 | 18,329 | - 1,137 | - 5.8 |
| Lumber | 237 | 304 | + 40 | + 15.4 |
| Furniture | 935 | 845 | - 12 | - 1.4 |
| Stone/Glass | 296 | 370 | + 6 | + 1.6 |
| Primary Metals | 779 | 795 | + 8 | + 1.0 |
| Fab. Metals | 6,929 | 6,718 | - 391 | - 5.5 |
| Machinery | 4,440 | 3,917 | - 346 | - 8.1 |
| Elect. Mach. | 2,457 | 2,122 | - 157 | - 6.9 |
| Trans. Equip. | 1,106 | 925 | - 118 | - 11.3 |
| Instruments | 2,263 | 2,333 | - 167 | - 6.7 |
| Non-Durables | 32,928 | 33,315 | - 221 | - .7 |
| Food | 5,783 | 5,205 | - 357 | - 6.4 |
| Textiles | 656 | 619 | - 15 | - 2.4 |
| Apparel | 7,523 | 7,911 | + 74 | + .9 |
| Paper | 1,149 | 1,103 | - 61 | - 5.2 |
| Print./Publish | 11,250 | 11,843 | + 227 | + 2.0 |
| Chemicals | 2,117 | 1,461 | + 219 | + 9.8 |
| Petroleum | 251 | 240 | - 12 | - 4.8 |
| Rubber/Plast. | 1,193 | 1,175 | - 153 | - 11.5 |
| Leather | 1,411 | 1,109 | - 195 | - 15.0 |
| Misc. Manuf. | 1,595 | 1,649 | + 52 | + 3.3 |
| T.C.P.U. | 34,958 | 35,994 | + 904 | + 2.6 |
| Trade | 81,383 | 82,098 | + 305 | + 3.7 |
| Wholesale | 26,098 | 26,117 | + 329 | + 1.3 |
| Retail | 55,285 | 55,981 | - 24 | 0 |
| F.I.R.E. | 64,794 | 69,810 | - 2,906 | + 4.3 |
| Services | 166,047 | 171,707 | - 73 | 0 |
| Business | 47,923 | 50,107 | - 1,076 | - 2.1 |
| Professional | 118,124 | 121,600 | + 1,003 | + .8 |
| Sub-Total, Public | 86,775 | 87,171 | - 879 | - 1.0 |
| Federal | 22,252 | 21,715 | - 788 | - 3.5 |
| State | 30,922 | 32,885 | + 1,027 | + 3.2 |
| Local | 33,601 | 32,581 | - 1,108 | - 3.3 |
| Grand Total | 495,643 | 508,827 | + 1,449 | + .3 |

Source: Compiled by BRA Research Department from Massachusetts Division of Employment Security ES-202 Reports, 1980-1981.

